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ABSTRACT

This report presents detailed statistical tables that reflect the demographic and employment characteristics of doctoral degree holding scientists and engineers in the United States. The data were collected from the 1999 Survey of Doctorate Recipients (SDR) with the purpose of providing information to researchers and policymakers in their decision making regarding academic achievement and career patterns. Contents include: (1) General Notes; (2) Technical Notes; and (3) Detailed Statistical Tables. Appendices include Degree Field List, Occupation Field List, Generalized Variance Function (GVF) Tables, and the 1999 Survey Questionnaire. (YDS)

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Characteristics of Doctoral Scientists and Engineers in the United States: 1999

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Detailed Statistical Tables

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Division of Science Resources Statistics
Directorate for Social, Behavioral, and Economic Sciences
National Science Foundation
August 2002

Characteristics of Doctoral Scientists and Engineers in the United States: 1999

Detailed Statistical Tables

Kelly H. Kang, Project Officer

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SECTION I. GENERAL NOTES

This report presents data on the demographic and employment characteristics of the nation's doctoral sciences and engineers. The data were developed as part of the Doctorate Data Project.[1] The goal of the 1999 Survey of Doctorate Recipients (SDR) is to provide policymakers and researchers with high-quality data and analyses for making informed decisions related to the educational achievement and career patterns of the nation's doctoral sciences and engineers. Current information on the supply and utilization of doctoral personnel in science and engineering reflects the results of SDR, the 14th in a biennial series. The population of the 1999 survey includes persons under the age of 76 who hold doctorates in science or engineering from U.S. institutions.

The SDR is a longitudinal demographic survey of science and engineering doctorate holders conducted biennially for the National Science Foundation (NSF) and for other Federal agencies (current and past sponsors included NIH and DOE) since 1973. The Technical Notes in Section II contain information on survey methodology, coverage, concepts, definitions, and sampling errors. Various changes made in the 1999 data tables are also noted in the Technical Notes.

The detailed statistical tables in Section III provide information on the number and median salaries of scientists and engineers by field of degree and occupation; for demographic characteristics such as gender, race/ethnicity, and citizenship; and employment-related characteristics such as occupation, sector of employment, median annual salary, and various labor force rates.

For further information on the survey or the availability of data on Science and Engineering doctorates, please go to http://www.nsf.gov/sbe/srs/cdse/start.htm or contact:

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[1] The Doctorate Data Project consists of the Survey of Doctorate Recipients, a biennial survey conducted since 1973, and the Survey of Earned Doctorates, an annual census of research doctorates awarded since 1920, which forms the Doctorate Records File.

SECTION II. TECHNICAL NOTES

The data on doctoral sciences and engineers contained in this report come from the 1999 Survey of Doctorate Recipients (SDR),[1] which is a longitudinal panel survey of individuals who have received their doctorates in the sciences or engineering (S&E). Since the 1970s, this study has been conducted every two years for the National Science Foundation (NSF) and other federal sponsors.[2]

The U.S. Census Bureau conducted the survey for the NSF in 1999. Data collected in the SDR are part of the Sciences and Engineers Statistical Data System (SESTAT), surveys that are sponsored and maintained by NSF. Additional data on education and demographic information in the SDR come from the Survey of Earned Doctorates (SED), an ongoing annual census of research doctorates earned in the United States since 1920, which forms the Doctorate Records File (DRF).

THE SAMPLING FRAME AND TARGET POPULATION

The sampling frame for the 1999 SDR was compiled from the DRF to include individuals who:

1. Had earned a doctoral degree from a U.S. college or university in a S&E field[3]
2. Were U.S. citizens or, if non-U.S. citizens, indicated they had plans to remain in the United States after degree award
3. Were under 76 years of age

The 1999 frame consisted of the 1997 SDR sample supplemented with new S&E doctorate graduates who had earned their doctoral degrees since the 1997 survey and who met the conditions listed above. Those who were carried over from 1997 but had attained the age of 76 (or were deceased) were deleted from the frame.

The survey had two additional eligibility criteria for the survey target population. The sampled member must be a resident of the United States and not institutionalized as of the survey reference date.

SAMPLE DESIGN

In 1999, the SDR sample size was 40,000. The total sample was selected from three groups:

- Old cohort cases with doctoral degrees earned prior to July 1, 1992
- Nearly new cohort cases with doctoral degrees earned between July 1, 1992 and June 30, 1996
- New cohort cases with doctoral degrees earned between July 1, 1996 and June 20, 1998

The goals of the 1999 SDR sample design included the following:

- Reduce the variation in the sampling weights of the old and nearly new cohorts
- Allocate the sample so the variance of overall population estimates are minimized
- Allocate the sample so the sampling rate of the new cohort is at least 15 percent higher than that of the old cohort
- Allocate the sample so the sampling rate of the nearly new cohort is at least 10 percent higher than that of the old cohort
- Adjust the sample allocation if any large stratum receives a disproportionate amount of sample

To ensure that the sampling rate of the new cohort was at least 15 percent higher than that of the old cohort, 4,000 of the total sample was from the new cohort group. The remaining 36,000 sample cases were then divided so that the nearly new cohort would have a 10 percent higher sample allocation than the old cohort.

The basic sampling design was a stratified design where strata were defined by 15 broad fields of study, 2 genders, and an 8-category "demographic group" variable combining race/ethnicity, disability status, and citizenship status. The sample cases were combined in the multi-way cross of the stratification variables. The sample allocation to select the cases from each stratum followed a seven-step process. For strata where the allocated sample size was equal to the frame size, all cases were selected for the sample. For all other strata, sample cases were selected using the probability-proportional-to-size (PPS) selection method separately for each cohort group (with the sampling weights as the size measure).

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[1] The discussions presented here are partly from the 1999 Survey of Doctorate Recipients Methodology Report (Census Bureau, 2002).

[2] In 1999, the National Institutes of Health co-sponsored the SDR with NSF. In previous rounds, the Department of Energy and the National Endowment for the Humanities co-sponsored the survey.

[3] See Appendix A for a list of the science and engineering fields included in the 1999 SDR sampling frame.

The overall sampling rate was about 1 in 16 (6.2 percent) in the 1999 SDR, applied to an estimated science and engineering doctoral population of 650,300. However, sampling rates varied considerably within and among the strata.

SURVEY CONTENT

The 1999 SDR still retained the questionnaire design changes that were implemented in 1993. A large set of core data items is conveyed from year to year to enable trend comparisons. Each survey year, a different set of module questions on special topics of interest are included. For example, the 1995 SDR questionnaire had a postdoc module and the 1997 had special modules on alternative work arrangements, job security concerns, and recent doctorates' initial career experiences. No special module was introduced in the 1999 questionnaire except for the retention of a few recent doctorate module questions from 1997, such as first career path job and doctoral training experiences.

DATA COLLECTION

The 1999 SDR data collection consisted of two phases: a self-administered mail survey, followed by computer-assisted telephone interviewing (CATI) of a sample of the nonrespondents to the mail survey. The mail survey consisted of an advance letter and the several waves of a personalized mailing package, with a reminder postcard between the first and second questionnaire mailing. The advance letter was sent in May 1999, followed by the first mailing a week later. The second mailing via USPS priority mail was sent in July 1999. The CATI follow-up of mail nonrespondents ended in February 2000.

RESPONSE RATES

The overall unweighted response rate for the 1999 SDR was 81.5 percent. The response to the mail phase of the survey was about 70 percent. The response rate to the CATI phase was about 43 percent. The overall weighted response rate was about 82 percent (weighted response divided by the weighted sample cases).

DATA PREPARATION

Data preparation for the 1999 SDR consisted of clerical, keying, and coding operations performed manually by the Census National Processing Center (NPC) and the computer operations performed by the Census Demographic Surveys Division (DSD). Data preparation began in May 1999 when the first mail questionnaires were returned to the NPC and continued through October 2000 when the DSD delivered the SESTAT formatted, edited, imputed data file to the NSF.

As the mail questionnaires were received, they were checked into the tracking system. The mail-returned questionnaires that had one or more entries were clerically edited for data entry preparation. The clerical edit was limited to simple edits such as correcting illegible entries; rounding fractions to the closest whole number; verifying that city, state, and country entries were in the correct location.

Clerically edited questionnaires were grouped into batches, keyed, and verified using the Key Entry III (KE III) system. The KE III system generated a keying report to track the status of cases through the keying operation. As part of quality control procedures, 5 percent verification was performed of all keyed questionnaires. For some questionnaire items (F9 Birthdate, F13/F14/F16 Contact information), a 100 percent verification of questionnaire items was performed.

NPC transmitted the keyed questionnaire data on a regular basis during the data collection phase to the DSD. DSD performed computer editing to identify cases with missing critical items (A1/A2 labor force status, A6/A21 job codes, F6 resident status in U.S., F9 birthdate) and generated Telephone Follow-up sheets. Telephone call-backs were made to obtain a response to these critical items; otherwise they were considered as incomplete responses. Whenever these callbacks were made, every attempt was made to obtain responses to other missing important data items (A7 FT/PT status, A15/A17 employment sector, A18/A19 type of educational institution, A26 job start date, A30/A31 work activities, and F14 future contact information).

Since the DSD collected data in mail and CATI, the data sets were merged into one data set. The coding operation involved special coding of occupation and education codes, other specify coding, state and country coding and IPEDS coding. For special coding of occupation, the respondent's occupational data were reviewed along with other work-related data from the questionnaire by specially trained coders to "correct" known respondent self-reporting problems to obtain the "best" occupation codes. The education code for a newly earned degree was assigned strictly based on the degree field verbatim.

The "other specify" responses were backcoded to existing response categories using the SESTAT other specify coding guidelines. Employer location (A11), Degreed school location (D6) and Country of citizenship (F8) were assigned the appropriate three-digit FIPS state/country code. The Integrated Postsecondary Education Data System (IPEDS) was used to assign codes for the employers (A11) that are postsecondary institutions and for the newly earned degree school (D6).

A detailed edit specification was developed from the SESTAT edit guidelines to perform further computer editing of multiple values to "Mark One" questions, skip errors, range errors, internal inconsistencies, cross-year inconsistencies. Basic frequency distributions of all survey items showed item nonresponse rates to be generally less than 3 percent. Nonresponse to a few questions deemed somewhat sensitive, such as household income, was around 6.2 percent.

To compensate for item nonresponse, data not reported by the respondents as well as responses of "refused" or "don't know" were imputed. Imputation is a process for treating missing data. Imputation methods are used when answers to questions are blank or not usable. Two imputation methods were used: (1) logical imputation, and (2) hot deck imputation. For logical imputation, either the respondent's answers to related questions determined what the missing value had to be, or the respondent's answer to the same question in the prior survey round was substituted for the missing value. The latter approach of using the historical data is often called "cold deck" imputation. Cold deck imputation is useful for variables that are static, such as place of birth or gender. When logical imputation was used, it was employed before hot deck imputation.

In hot deck imputation, a donor case is selected from the current round of respondents by matching related variables. The donor case's response is used as a proxy for the recipient's missing variable. Hot deck imputation is the method of choice for variables that may change over time, such as employment characteristics. Hot deck is preferable to model-based imputation in this application because it easily preserves correlation among variables and maintains the valid response ranges for categorical variables.

WEIGHTING AND ESTIMATION

To enable weighted analyses of the 1999 SDR data, a sample weight was calculated for every person in the sample. The primary purpose of the weights is to create representative estimates by adjusting for unequal probabilities of selection. The second purpose is to adjust for the effects of nonresponse without increasing the variance. Informally, a sampling weight approximates the number of persons in the Ph.D. population that a sampled person represents. A main goal of this weighting plan is to produce final weights that reduce the nonresponse bias in our survey estimates, without increasing the variance.

The weights were calculated in several stages. The first stage was the calculation of base weights that account for the sample design. A base weight is the inverse of the probability of selection in the SDR sample. For cases selected with certainty, the 1999 SDR base weight is equal to the 1999 SDR initial weight. For all other cases, the 1999 SDR base weight is greater than the initial weight. This increase reflects an adjustment for cases not selected for the sample.

From the 1999 SDR base weights, the production of the 1999 SDR final weights involved four main steps:

- Adjustment for duplicate, frame ineligible, and never earned doctorate cases
- Calculation of the 1999 SDR control totals
- Calculation of the 1999 SDR noninterview weights
- Calculation of the 1999 SDR final weights

Raking ratio adjustment was used to control the 1999 SDR sample back to the 1999 SDR population totals. The purpose of this adjustment is twofold:

- To decrease the sampling variability
- To account for changes in the final weights due to changes in the eligible sampling frame

RELIABILITY

Because the estimates produced from this survey are based on a sample, they may vary from those that would have been obtained if all members of the target population had been surveyed (using the same questionnaire and data collection methods). Two types of error are possible when population estimates are derived from any sample survey: sampling error and nonsampling error. By looking at these errors, it is possible to estimate the accuracy and precision of the survey results.

Sampling error is the variation that occurs by chance because a sample, rather than the entire population, is surveyed. The particular sample that was used to estimate the 1999 population of science and engineering doctorates in the United States was one of a large number of samples that could have been selected using the same sample design and size. Estimates based on each of these samples would have differed. Thus, one should be particularly careful when interpreting results based on a relatively small number of cases or on small differences between the estimates.

Due to the large amount of data collected in the SDR, it is not practical to directly calculate variance estimates for every survey estimate. Instead, generalized variance functions were developed to model the variance estimates for certain characteristics. Parameters derived from these generalized variance functions approximate variance estimates for all survey items. As a result, these sampling errors provide an indication of the order of magnitude of a sampling error rather than a precise sampling error for any specific item.

The variances on the survey estimates were calculated by the successive difference replication method. This replication method was used to first calculate a small number of variance estimates, which were then used to estimate the parameters of the generalized variance function. An one-parameter model was used to calculate the generalized variance parameters which were estimated using an iterative weighted least square procedure.

Since many of the SDR estimates of interest consist of small populations such as estimates of Hispanic sciences or black engineers, the finite population correction factor was consistently applied to all the variance estimates.

Different generalized variance functions were used to estimate standard errors associated with a broader range of totals and percentages. The *a* and *b* parameters were calculated for each of the demographic groups and fields of study shown in Appendix C. The *a* and *b* parameters can be used to approximate standard errors for the S&E doctoral population overall, for broad field groupings used by NSF, and for selected subgroups of analytic interest.

STANDARD ERROR OF ESTIMATED NUMBERS

To calculate the desired standard errors on numbers, let X denote the estimated number. The standard error can be approximated using the appropriate values of a and b along with the following formula for standard errors of totals:

$$SE(X) = [aX^2 + bX]^{\frac{1}{2}} \qquad (1)$$

When calculating standard errors for numbers from tabulations involving different characteristics, use the set of parameters for the characteristic which will give the largest standard error.

Illustration

Suppose an estimated 2,770 females with a doctorate in the biological sciences were reported as working in the Federal Government in 1999.

Use the appropriate generalized variance parameters from Appendix C to get:

Survey estimate X = 2,770
a parameter = -0.000085
b parameter = 13.0631

Use formula (1) to approximate the standard error on the estimated number of 2,770 as:

$$SE(X) = [(-0.000085 \times 2{,}770^2) + (13.0631 \times 2{,}770)]^{\frac{1}{2}}$$
$$= 189$$

The 95% confidence interval is calculated using the following formula:

$$95\%\ CI = X \pm 1.96 \times SE(X) \qquad (2)$$

where

X is the survey estimate of interest, and SE(X) is the estimated standard error for the survey estimate of interest.

Using formula (2) above, the 95% confidence interval is:

$$2{,}770 \pm 1.96 \times 189 \text{ or } 2{,}770 \pm 370$$

Therefore, the 95% confidence interval has the following limits:

Lower limit = 2,401
Upper limit = 3,139

So we can say with 95% confidence that the number of females with biological sciences doctorates working in the Federal Government in 1999 is estimated to be between 2,401 and 3,139.

STANDARD ERROR OF ESTIMATED PERCENTAGES

To calculate the standard errors on percentages, let *p* equal the percentage possessing the specific characteristic and *X* and *Y* represent the numerator and denominator, respectively, of the ratio that yields the observed percentage. The standard error of a percentage may be approximated using the formula:

$$SE(p) = p(\{[SE(X)^2]/X^2\}) - (\{[SE(Y)]^2/Y^2\})^{1/2} \qquad (3)$$

where

X and *Y* are survey estimates of interest, SE(*X*) and SE(*Y*) are the corresponding standard error estimates derived using formula (1), and *p* is the estimated percentage ($p = (X/Y) \times 100$).

Illustration

Suppose an estimated 2,770 of the 8,870 biological sciences doctorates working in the Federal Government are women. Therefore, the estimated percentage of biological sciences doctorates working in the Federal Government who are women is 31.2%.

Use formula (1) and the appropriate parameters from Appendix C, to get:

	X	*Y*	*p*
Survey estimate	2,770	8,870	31.2%
a parameter	-0.000085	-0.000092	——
b parameter	13.0631	16.8031	——
Standard error	189	377	

Insert the above numbers into formula (3) to approximate the standard error on the estimate of 31.2% as:

$$SE(p) = 31.2\,[(189^2/2{,}770^2) - (377^2/8{,}879^2)]^{1/2} = 1.7\%$$

Using formula (2), the 95% confidence interval is:

$$31.2\% \pm 1.96 \times 1.7\% \text{ or } 31.2\% \pm 3.3\%$$

Therefore, the 95% confidence interval has the following limits:

Lower limit = 27.9%
Upper limit = 34.5%

STANDARD ERROR OF A DIFFERENCE

To calculate the standard errors of the difference between two sample estimates, let *X* and *Y* represent two estimates of interest and SE(*X*) and SE(*Y*) the corresponding standard error estimates derived using formula (1).

$$SE(X - Y) = \{[(SE(X)]^2 + [SE(Y)]^2\}^{1/2} \qquad (4)$$

The estimates can be numbers, percentages, ratios, etc. This will represent the actual standard error quite accurately for the difference between estimates of the same characteristic in two different areas or for the difference between separate and uncorrelated characteristics in the same area.

Illustration

In 1999, suppose there were an estimated 6,100 male and 2,770 female biological sciences doctorates. The apparent difference between the estimated number of male and female biological sciences doctorates is 3,330.

Use the appropriate parameters from Appendix C and formula (1) to get:

	X	*Y*	**Difference**
Survey estimate	6,100	2,770	3,330
a parameter	-0.000092	-0.000085	——
b parameter	16.8031	13.0631	——
Standard error	315	189	

The standard error of the difference is calculated using formula (4):

$$SE(X - Y) = ([315^2 + 189^2])^{1/2} = 367$$

The 95% confidence interval is calculated as 3,330 ± 1.96 × 367 or 3,330 ± 719. Since this interval does not include zero, we can conclude with 95% confidence that the estimated number of male life sciences doctoral recipients is significantly higher than the number of female life sciences doctoral recipients.

However, if there is a high positive (negative) correlation between the two characteristics, the formula will overestimate (underestimate) the true standard error.

In addition to sampling error, data are subject to nonsampling error, which can arise at many points in the survey process. Sources of nonsampling error take many different forms: (1) nonresponse bias, which arises when the characteristics of individuals who do not respond to a survey differ significantly from those who do; (2) measurement error, which arises when we are not able to precisely measure the variables of interest; (3) coverage error, which arises when some members of the target population are not identified and thus do not have a chance to be selected for the sample; and (4) processing error, which can arise at the point of data editing, coding or key entry. These sources of error are much harder to estimate than sampling errors.

IMPORTANT NOTES ON THE TABLES

The following definitions are provided to help facilitate the use of data in the detailed tables.

Field of doctorate is the field of degree as specified by the respondent in the Survey of Earned Doctorates (SED) at the time of degree conferral. These codes were subsequently recoded to the SESTAT codes. (See Appendix A for the doctorate degree fields.)

Occupation data were derived from responses to several questions on the type of work primarily performed by the respondent. The occupational classification of the respondent was based on his/her principal job held during the reference week—or last job held, if not employed in the reference week (questions A20 or A5). Also used in the occupational classification was a respondent-selected job code (questions A21 or A6). (See Appendix B for the list of occupations.)

Sector of employment was based on responses to questions A15 and A17. The category "universities and 4-year colleges" includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), university- affiliated research institutions, and other types of institutions. "Private-for-Profit" includes those self-employed in incorporated business.

Employer location was based primarily on responses to question A11 on the location of the principal employer. Individuals not reporting place of employment were classified by their last mailing address.

Primary work activity was determined from responses to question A30. "Development" includes the development of equipment, products, and systems. "Design" includes the design of equipment, processes, and models.

Federal support was determined from responses to questions A41 and A42.

Faculty rank/tenure status was obtained from the responses to questions A18 and A19.

Race/ethnicity categories of white, black, Asian/ Pacific Islander and American Indian/ Alaskan Native refer to non-Hispanic individuals only. These data are from the SED.

Citizenship status category of non-U.S., temporary resident does not include individuals who, at the time they received their doctorate, expressed plans to leave the United States. These individuals were excluded from the sampling frame.

Salary data were derived from responses to question A34, in which information was requested regarding annual salary before deductions for the principal job held during April 1999, excluding income from bonuses, overtime, and summer teaching/research. Salaries reported are median annual salaries, rounded to the nearest $100 and computed for full-time employed sciences and engineers. For individuals employed by education institutions, no accommodation was made to convert academic-year salaries to calendar-year salaries. Users are advised that due to changes in the salary question since 1993, the 1995, 1997 and 1999 salary data are not strictly comparable with 1993 data.

Labor force participation rate. The labor force is defined as those employed (E) plus those unemployed (U, those not-employed persons actively seeking work). Population (P) is defined as all S&E doctorate holders under age 76, residing in U.S. during the week of April 15, 1999, who earned their doctorate from a U.S. institution. The labor force participation rate (R_{LF}) is the ratio of the labor force to the population (P).
$R_{LF} = (E+U) / P$

Unemployment rate. The unemployment rate (R_u) is the ratio of those who are unemployed but seeking employment (U) to the total labor force (E+U). $R_u = U / (E+U)$

Involuntarily out-of-field rate. The involuntarily out-of-field rate is the percent of employed individuals who reported they were either:

- Working part-time exclusively because suitable full-time work was not available
- Working in an area in their principal job not related to the first doctoral degree at least partially because suitable work in the field was not available.

SUMMARY OF TABLE CHANGES IN 1999 COMPARED TO 1997 TABLES

GLOBAL CHANGES

1. For all degree field tables, "Computer and information sciences" and "Mathematical sciences" are now separately displayed as broad field groups.
2. Tables were regrouped and renumbered to display the field-of-doctorate-based tables first, followed by the occupation-based tables.
3. Percent distributions were added to most tables in addition to estimated numbers.
4. On all occupation-based tables, "Material/metallurgical engineers" group, which is a larger group, replaced "Industrial engineers."

Specific table modifications in 1999 [1997 table number]

Table 7 [9,11]	Gender and race/ethnicity tables by doctorate field data are now combined into one table and reported for employed only.
Table 8 [13]	Citizenship status by doctorate field data are reported for employed only.
Table 9 [15]	Age by field of doctorate field data are reported for employed only.
Table 14 [22]	"Primary or secondary" work activity data replace "Primary" work activity.
Table 15 [24]	Puerto Rico is now listed separately from other U.S. Territories.
Table 29 [10,12]	Gender and race/ethnicity by occupation data are reported for employed only.
Table 30 [14]	Citizenship status by occupation data are reported for employed only.
Table 31 [16]	Age by occupation data are reported for employed only.
Table 36 [23]	"Primary or secondary" work activity data replace "Primary" work activity.
Table 37 [25]	Puerto Rico is now listed separately from other U.S. Territories.
Table 40 [30]	"Years since doctorate" data replace "Employer location."
Table 41 [31,35]	1997 tables 31 and 35 are now combined into one table. "Primary or secondary work activity" and "Years since doctorate" data replace the "Employer location" and "Place of birth" data in 1997 table 31; table title changed to "selected demographic and employment-related characteristics."

Table 42 [33,34]	1997 tables 33 and 34 are now combined into one table. "Years since doctorate" data replace "Place of birth"; "Primary or secondary work activity" data replace "Primary" work activity; table title changed to "selected demographic and employment-related characteristics."
Table 43 [32,36]	1997 tables 32 and 36 are now combined into one table. "Employment sector" and "Years since doctorate" data replace "Employer location" and "Place of birth"; "Primary or secondary work activity" data replace "Primary" work activity; table title changed to "selected demographic and employment-related characteristics."
Table 48 [57]	"Years since doctorate" data replace 'year of doctorate."
Table 53 [58]	Puerto Rico is now listed separately from other U.S. Territories.
Table 68 [59]	Puerto Rico is now listed separately from other U.S. Territories.

1997 Tables dropped in 1999

1997 table 34	Combined with another table [1997 table 33]
1997 table 35	Combined with another table [1997 table 31]
1997 table 36	Combined with another table [1997 table 32]
1997 tables 48 through 56	Median annual salary tables on demographic and employment-related characteristics

New Tables in 1999

Table 10	Field of doctorate by years since doctorate
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Table 46	Median annual salary table for 1999 table 8
Table 47	Median annual salary table for 1999 table 9
Table 54	Median annual salary table for 1999 table 16
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* New tables in 1999
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Table 1. Doctoral scientists and engineers, by field of doctorate and employment status: 1999

Field of doctorate	All fields	Employed				Unemployed/ seeking work	Retired	Not employed/ not seeking work
		Total	Full time	Part time	Postdoc[1]			
All fields	626,700	553,360	488,610	40,740	24,020	7,380	53,040	12,910
Sciences	519,500	457,470	397,760	37,100	22,610	5,900	44,460	11,660
Computer and information sciences	9,740	9,600	9,160	330	100	S	S	60
Mathematical sciences	28,680	25,300	23,210	1,450	640	190	2,670	520
Biological and agricultural sciences	153,050	134,360	112,460	7,560	14,350	1,610	13,120	3,960
Agricultural/food sciences	19,340	16,560	14,980	920	660	170	2,320	300
Biological sciences	128,050	112,840	92,890	6,440	13,500	1,390	10,200	3,620
Environmental life sciences	5,660	4,970	4,580	200	190	S	600	S
Health sciences	21,390	19,310	17,270	1,530	510	260	1,420	400
Physical and related sciences	128,410	110,300	99,600	6,210	4,490	1,950	13,790	2,380
Chemistry except biochemistry	66,740	55,810	50,940	2,930	1,930	1,190	8,360	1,390
Earth/atmos/ocean sciences	18,360	15,940	14,260	1,010	680	350	1,730	330
Physics and astronomy	43,310	38,560	34,400	2,270	1,880	410	3,700	650
Social sciences	85,040	74,300	67,440	6,250	610	840	8,100	1,790
Economics	24,350	21,190	19,800	1,240	150	230	2,680	250
Political and related sciences	18,570	16,090	14,620	1,370	100	180	1,930	370
Sociology	15,550	13,420	12,070	1,180	170	160	1,630	350
Other social sciences	26,570	23,590	20,950	2,470	180	280	1,870	820
Psychology	93,180	84,300	68,620	13,770	1,910	1,010	5,310	2,560
Engineering	107,200	95,890	90,850	3,640	1,410	1,480	8,580	1,250
Aerospace/aeronautical engineering	4,680	4,360	4,030	250	80	S	210	100
Chemical engineering	14,800	12,520	11,810	540	170	400	1,670	210
Civil engineering	9,420	8,700	8,120	450	130	90	530	100
Electrical/computer engineering	28,520	25,980	24,820	880	290	330	1,940	260
Materials/metallurgical engineering	11,200	9,970	9,270	340	360	180	800	240
Mechanical engineering	14,040	12,780	12,290	360	130	90	1,080	90
Other engineering	24,550	21,580	20,500	820	260	370	2,350	250

[1] Postdoc is a temporary position awarded in academe, industry, or government primarily for gaining additional education and training in research.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

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Table 2. Doctoral scientists and engineers, by broad field of doctorate, employment status, and sex: 1999

Page 1 of 2

Employment status/field of doctorate	Total	Male	Female
All fields	626,700	476,490	150,200
Employed full time	511,620	397,630	113,990
Employed part time	41,740	22,240	19,500
Unemployed, seeking work	7,380	5,200	2,180
Retired	53,040	46,670	6,370
Not employed, not seeking work	12,910	4,750	8,160
Sciences	519,500	376,430	143,070
Employed full time	419,450	311,350	108,100
Employed part time	38,020	19,010	19,010
Unemployed, seeking work	5,900	3,930	1,970
Retired	44,460	38,140	6,320
Not employed, not seeking work	11,660	4,000	7,660
Computer and information sciences	9,740	8,100	1,640
Employed full time	9,250	7,800	1,440
Employed part time	350	200	150
Unemployed, seeking work	S	S	S
Retired	S	S	S
Not employed, not seeking work	60	S	S
Mathematical sciences	28,680	24,700	3,980
Employed full time	23,810	20,760	3,050
Employed part time	1,490	1,020	470
Unemployed, seeking work	190	140	S
Retired	2,670	2,470	200
Not employed, not seeking work	520	310	210
Biological and agricultural sciences	153,050	111,300	41,750
Employed full time	126,410	93,700	32,700
Employed part time	7,950	4,140	3,810
Unemployed, seeking work	1,610	970	640
Retired	13,120	11,180	1,940
Not employed, not seeking work	3,960	1,310	2,650

See explanatory information and SOURCE at end of table.

Table 2. Doctoral scientists and engineers, by broad field of doctorate, employment status, and sex: 1999

Page 2 of 2

Employment status/field of doctorate	Total	Male	Female
Health sciences	21,390	9,760	11,630
Employed full time	17,730	8,290	9,440
Employed part time	1,590	390	1,200
Unemployed, seeking work	260	150	110
Retired	1,420	880	540
Not employed, not seeking work	400	50	340
Physical and related sciences	128,410	112,140	16,280
Employed full time	104,020	90,960	13,060
Employed part time	6,280	5,290	990
Unemployed, seeking work	1,950	1,670	280
Retired	13,790	13,030	760
Not employed, not seeking work	2,380	1,190	1,180
Social sciences	85,040	60,090	24,950
Employed full time	68,010	48,520	19,490
Employed part time	6,290	3,510	2,780
Unemployed, seeking work	840	520	330
Retired	8,100	6,850	1,250
Not employed, not seeking work	1,790	690	1,100
Psychology	93,180	50,340	42,850
Employed full time	70,220	41,310	28,920
Employed part time	14,080	4,460	9,610
Unemployed, seeking work	1,010	440	570
Retired	5,310	3,700	1,610
Not employed, not seeking work	2,560	420	2,130
Engineering	107,200	100,060	7,140
Employed full time	92,170	86,280	5,890
Employed part time	3,720	3,230	490
Unemployed, seeking work	1,480	1,270	210
Retired	8,580	8,530	S
Not employed, not seeking work	1,250	750	500

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). Details may not add to total because of rounding.

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 3. Doctoral scientists and engineers, by broad field of doctorate, employment status, and race/ethnicity: 1999

Page 1 of 2

Employment status/field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
All fields	626,700	508,450	14,200	87,000	14,990	2,050
Employed full time	511,620	406,150	12,460	78,450	12,830	1,730
Employed part time	41,740	36,970	840	2,650	1,180	100
Unemployed, seeking work	7,380	5,790	160	1,250	120	50
Retired	53,040	48,810	450	3,040	600	150
Not employed, not seeking work	12,910	10,720	290	1,610	250	S
Sciences	519,500	436,340	12,610	55,970	12,730	1,850
Employed full time	419,450	346,620	11,000	49,500	10,790	1,540
Employed part time	38,020	33,860	780	2,230	1,070	90
Unemployed, seeking work	5,900	4,800	150	770	120	50
Retired	44,460	41,270	440	2,110	520	130
Not employed, not seeking work	11,660	9,800	240	1,360	230	S
Computer and information sciences	9,740	6,530	170	2,830	210	S
Employed full time	9,250	6,110	160	2,760	210	S
Employed part time	350	330	S	S	S	S
Unemployed, seeking work	S	S	S	S	S	S
Retired	S	S	S	S	S	S
Not employed, not seeking work	60	S	S	S	S	S
Mathematical sciences	28,680	22,840	470	4,550	820	S
Employed full time	23,810	18,670	370	4,060	690	S
Employed part time	1,490	1,170	80	230	S	S
Unemployed, seeking work	190	180	S	S	S	S
Retired	2,670	2,350	S	210	100	S
Not employed, not seeking work	520	470	S	S	S	S
Biological and agricultural sciences	153,050	127,150	2,870	18,910	3,620	500
Employed full time	126,410	103,650	2,580	16,650	3,100	430
Employed part time	7,950	6,900	160	660	230	S
Unemployed, seeking work	1,610	1,370	S	170	S	S
Retired	13,120	12,230	80	600	170	S
Not employed, not seeking work	3,960	3,000	50	820	70	S

See explanatory information and SOURCE at end of table.

Table 3. Doctoral scientists and engineers, by broad field of doctorate, employment status, and race/ethnicity: 1999

Page 2 of 2

Employment status/field of doctorate	All fields	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
Health sciences	21,390	17,620	1,100	2,010	540	120
Employed full time	17,730	14,460	940	1,740	460	120
Employed part time	1,590	1,340	100	100	S	S
Unemployed, seeking work	260	170	S	80	S	S
Retired	1,420	1,280	S	80	S	S
Not employed, not seeking work	400	380	S	S	S	S
Physical and related sciences	128,410	105,150	1,580	18,890	2,450	340
Employed full time	104,020	83,090	1,480	16,980	2,180	300
Employed part time	6,280	5,620	60	500	80	S
Unemployed, seeking work	1,950	1,500	S	400	S	S
Retired	13,790	12,880	S	760	110	S
Not employed, not seeking work	2,380	2,060	S	250	60	S
Social sciences	85,040	72,220	3,440	6,640	2,330	410
Employed full time	68,010	57,240	2,850	5,580	2,030	290
Employed part time	6,290	5,340	230	500	190	S
Unemployed, seeking work	840	610	80	70	S	S
Retired	8,100	7,490	200	350	S	S
Not employed, not seeking work	1,790	1,530	70	140	S	S
Psychology	93,180	84,840	2,990	2,150	2,760	450
Employed full time	70,220	63,390	2,620	1,730	2,120	360
Employed part time	14,080	13,160	150	220	500	S
Unemployed, seeking work	1,010	930	S	S	S	S
Retired	5,310	5,030	100	70	90	S
Not employed, not seeking work	2,560	2,330	100	70	S	S
Engineering	107,200	72,110	1,590	31,030	2,270	210
Employed full time	92,170	59,530	1,450	28,950	2,050	190
Employed part time	3,720	3,110	60	420	120	S
Unemployed, seeking work	1,480	990	S	470	S	S
Retired	8,580	7,540	S	930	80	S
Not employed, not seeking work	1,250	920	50	250	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 4. Selected employment characteristics of doctoral scientists and engineers, by field of doctorate: 1999

Field of doctorate	Unemployment rate	Involuntarily out-of-field rate	Labor force participation rate
	[Percent]		
All fields	1.3	4.3	89.5
Sciences	1.3	4.5	89.2
Computer and information sciences	S	1.7	98.9
Mathematical sciences	0.7	5.0	88.9
Biological and agricultural sciences	1.2	3.8	88.8
Agricultural/food sciences	1.0	4.4	86.5
Biological sciences	1.2	3.7	89.2
Environmental life sciences	S	2.7	88.7
Health sciences	1.3	2.8	91.5
Physical and related sciences	1.7	6.3	87.4
Chemistry except biochemistry	2.1	4.1	85.4
Earth/atmos/ocean sciences	2.2	5.8	88.8
Physics and astronomy	1.0	9.7	90.0
Social sciences	1.1	5.1	88.4
Economics	1.1	2.4	88.0
Political and related sciences	1.1	5.8	87.6
Sociology	1.2	4.9	87.3
Other social sciences	1.2	7.3	89.9
Psychology	1.2	3.5	91.6
Engineering	1.5	3.5	90.8
Aerospace/aeronautical engineering	S	2.3	93.5
Chemical engineering	3.1	3.3	87.3
Civil engineering	1.0	2.3	93.3
Electrical/computer engineering	1.3	2.5	92.3
Materials/metallurgical engineering	1.8	5.9	90.7
Mechanical engineering	0.7	3.9	91.6
Other engineering	1.7	3.9	89.4

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Population (P) is defined as all S&E doctorate holders under age 76, residing in U.S. during the week of April 15, 1999, who earned their doctorate from U.S. institutions. The labor force participation rate (R_{LF}) is the ratio of the labor force to the population: $R_{LF} = (E+U)/P$. The unemployment rate (R_U) is the ratio of those who are unemployed but seeking employment (U) to the total labor force (E+U): $R_U = U/(E+U)$. Involuntary-out-of field rate is the percent of employed individuals who reported they were working part-time exclusively because suitable full-time work was not available and/or working in an area not related to the first doctoral degree (in their principal job) at least partially because suitable work in the field was not available.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 5. Doctoral scientists and engineers, by field of doctorate and sex: 1999

Field of doctorate	Total	Male	Female	Total	Male	Female
	[Number]			[Percent]		
All fields	626,700	476,490	150,200	100.0	76.0	24.0
Sciences	519,500	376,430	143,070	100.0	72.5	27.5
Computer and information sciences	9,740	8,100	1,640	100.0	83.1	16.9
Mathematical sciences	28,680	24,700	3,980	100.0	86.1	13.9
Biological and agricultural sciences	153,050	111,300	41,750	100.0	72.7	27.3
Agricultural/food sciences	19,340	16,600	2,740	100.0	85.8	14.2
Biological sciences	128,050	89,800	38,250	100.0	70.1	29.9
Environmental life sciences	5,660	4,900	750	100.0	86.7	13.3
Health sciences	21,390	9,760	11,630	100.0	45.6	54.4
Physical and related sciences	128,410	112,140	16,280	100.0	87.3	12.7
Chemistry except biochemistry	66,740	55,970	10,770	100.0	83.9	16.1
Earth/atmos/ocean sciences	18,360	15,790	2,570	100.0	86.0	14.0
Physics and astronomy	43,310	40,380	2,930	100.0	93.2	6.8
Social sciences	85,040	60,090	24,950	100.0	70.7	29.3
Economics	24,350	20,400	3,950	100.0	83.8	16.2
Political and related sciences	18,570	14,570	4,000	100.0	78.5	21.5
Sociology	15,550	9,450	6,100	100.0	60.8	39.2
Other social sciences	26,570	15,680	10,890	100.0	59.0	41.0
Psychology	93,180	50,340	42,850	100.0	54.0	46.0
Engineering	107,200	100,060	7,140	100.0	93.3	6.7
Aerospace/aeronautical engineering	4,680	4,520	160	100.0	96.6	3.4
Chemical engineering	14,800	13,600	1,200	100.0	91.9	8.1
Civil engineering	9,420	8,900	520	100.0	94.5	5.5
Electrical/computer engineering	28,520	26,880	1,640	100.0	94.2	5.8
Materials/metallurgical engineering	11,200	9,970	1,230	100.0	89.1	10.9
Mechanical engineering	14,040	13,670	360	100.0	97.4	2.6
Other engineering	24,550	22,520	2,030	100.0	91.7	8.3

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 6. Doctoral scientists and engineers, by field of doctorate and race/ethnicity: 1999

Page 1 of 2

Field of doctorate	Total	White[1]	Black	Asian/Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Number]					
All fields	626,700	508,450	14,200	87,000	14,990	2,050
Sciences	519,500	436,340	12,610	55,970	12,730	1,850
Computer and information sciences	9,740	6,530	170	2,830	210	S
Mathematical sciences	28,680	22,840	470	4,550	820	S
Biological and agricultural sciences	153,050	127,150	2,870	18,910	3,620	500
Agricultural/food sciences	19,340	15,890	400	2,400	590	70
Biological sciences	128,050	106,130	2,420	16,170	2,940	390
Environmental life sciences	5,660	5,130	60	340	100	S
Health sciences	21,390	17,620	1,100	2,010	540	120
Physical and related sciences	128,410	105,150	1,580	18,890	2,450	340
Chemistry except biochemistry	66,740	53,480	1,140	10,480	1,460	180
Earth/atmos/ocean sciences	18,360	16,270	90	1,630	310	S
Physics and astronomy	43,310	35,400	340	6,770	690	110
Social sciences	85,040	72,220	3,440	6,640	2,330	410
Economics	24,350	20,110	650	2,980	550	60
Political and related sciences	18,570	16,190	970	960	420	S
Sociology	15,550	13,430	760	830	470	60
Other social sciences	26,570	22,480	1,060	1,880	880	270
Psychology	93,180	84,840	2,990	2,150	2,760	450
Engineering	107,200	72,110	1,590	31,030	2,270	210
Aerospace/aeronautical engineering	4,680	3,610	70	910	90	S
Chemical engineering	14,800	10,020	170	4,350	240	S
Civil engineering	9,420	6,400	180	2,550	270	S
Electrical/computer engineering	28,520	18,470	390	9,070	530	60
Materials/metallurgical engineering	11,200	7,430	190	3,240	330	S
Mechanical engineering	14,040	8,610	200	4,850	340	S
Other engineering	24,550	17,570	370	6,070	460	80

See explanatory information and SOURCE at end of table.

Table 6. Doctoral scientists and engineers, by field of doctorate and race/ethnicity: 1999

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Field of doctorate	Total	White[1]	Black	Asian/Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Percent]					
All fields	100.0	81.1	2.3	13.9	2.4	0.3
Sciences	100.0	84.0	2.4	10.8	2.4	0.4
Computer and information sciences	100.0	67.0	1.7	29.1	2.1	S
Mathematical sciences	100.0	79.6	1.6	15.9	2.8	S
Biological and agricultural sciences	100.0	83.1	1.9	12.4	2.4	0.3
Agricultural/food sciences	100.0	82.2	2.0	12.4	3.0	0.4
Biological sciences	100.0	82.9	1.9	12.6	2.3	0.3
Environmental life sciences	100.0	90.6	1.0	5.9	1.7	S
Health sciences	100.0	82.4	5.2	9.4	2.5	0.6
Physical and related sciences	100.0	81.9	1.2	14.7	1.9	0.3
Chemistry except biochemistry	100.0	80.1	1.7	15.7	2.2	0.3
Earth/atmos/ocean sciences	100.0	88.6	0.5	8.9	1.7	S
Physics and astronomy	100.0	81.7	0.8	15.6	1.6	0.3
Social sciences	100.0	84.9	4.0	7.8	2.7	0.5
Economics	100.0	82.6	2.7	12.2	2.2	0.3
Political and related sciences	100.0	87.2	5.2	5.2	2.3	S
Sociology	100.0	86.4	4.9	5.3	3.1	0.4
Other social sciences	100.0	84.6	4.0	7.1	3.3	1.0
Psychology	100.0	91.0	3.2	2.3	3.0	0.5
Engineering	100.0	67.3	1.5	28.9	2.1	0.2
Aerospace/aeronautical engineering	100.0	77.1	1.6	19.4	1.9	S
Chemical engineering	100.0	67.7	1.2	29.4	1.7	S
Civil engineering	100.0	68.0	1.9	27.0	2.9	S
Electrical/computer engineering	100.0	64.8	1.4	31.8	1.9	0.2
Materials/metallurgical engineering	100.0	66.3	1.7	28.9	2.9	S
Mechanical engineering	100.0	61.3	1.5	34.5	2.4	S
Other engineering	100.0	71.6	1.5	24.7	1.9	0.3

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 7. Employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1999

Page 1 of 4

Field of doctorate	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Number]								
All fields	553,360	419,870	133,490	443,120	335,360	107,760	13,300	8,530	4,770
Sciences	457,470	330,360	127,110	380,470	276,780	103,690	11,780	7,150	4,630
Computer and information sciences	9,600	8,000	1,590	6,440	5,300	1,140	160	130	S
Mathematical sciences	25,300	21,780	3,520	19,840	17,310	2,530	450	360	90
Biological and agricultural sciences	134,360	97,850	36,510	110,550	81,940	28,610	2,740	1,800	930
Agricultural/food sciences	16,560	14,070	2,490	13,360	11,510	1,850	400	350	S
Biological sciences	112,840	79,500	33,340	92,720	66,530	26,190	2,280	1,410	880
Environmental life sciences	4,970	4,280	690	4,470	3,890	580	60	S	S
Health sciences	19,310	8,680	10,640	15,800	6,810	8,990	1,040	510	530
Physical and related sciences	110,300	96,250	14,050	88,710	78,780	9,930	1,540	1,290	250
Chemistry except biochemistry	55,810	46,760	9,040	43,670	37,470	6,210	1,110	920	200
Earth/atmos/ocean sciences	15,940	13,660	2,280	13,940	12,020	1,920	90	60	S
Physics and astronomy	38,560	35,830	2,730	31,100	29,290	1,810	340	320	S
Social sciences	74,300	52,030	22,270	62,590	44,050	18,530	3,080	1,990	1,100
Economics	21,190	17,690	3,500	17,270	14,560	2,710	600	510	90
Political and related sciences	16,090	12,500	3,590	13,940	10,970	2,970	860	580	270
Sociology	13,420	8,010	5,410	11,570	6,930	4,640	660	410	250
Other social sciences	23,590	13,830	9,760	19,810	11,600	8,210	970	480	490
Psychology	84,300	45,770	38,530	76,550	42,600	33,950	2,770	1,060	1,710
Engineering	95,890	89,510	6,380	62,650	58,570	4,070	1,520	1,380	140
Aerospace/aeronautical engineering	4,360	4,210	150	3,340	3,250	90	70	70	S
Chemical engineering	12,520	11,570	950	8,210	7,590	620	160	120	S
Civil engineering	8,700	8,250	450	5,790	5,420	370	180	170	S
Electrical/computer engineering	25,980	24,440	1,550	16,250	15,430	820	350	320	S
Materials/metallurgical engineering	9,970	8,970	1,000	6,450	5,790	660	190	170	S
Mechanical engineering	12,780	12,440	340	7,600	7,440	160	200	200	S
Other engineering	21,580	19,630	1,950	15,010	13,650	1,360	360	320	S

See explanatory information and SOURCE at end of table.

Table 7. Employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1999

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Field of doctorate	Asian or Pacific Islander			Hispanic			American Indian/Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Number]								
All fields	81,100	64,860	16,240	14,020	9,800	4,220	1,820	1,320	500
Sciences	51,730	37,410	14,320	11,860	7,870	3,990	1,630	1,150	480
Computer and information sciences	2,780	2,400	380	210	180	S	S	S	S
Mathematical sciences	4,290	3,490	810	710	610	100	S	S	S
Biological and agricultural sciences	17,310	11,500	5,810	3,330	2,310	1,020	440	290	140
Agricultural/food sciences	2,190	1,670	520	560	480	80	S	S	S
Biological sciences	14,810	9,580	5,230	2,670	1,760	920	350	220	130
Environmental life sciences	310	240	60	90	70	S	S	S	S
Health sciences	1,840	1,110	720	510	200	320	120	S	80
Physical and related sciences	17,480	13,970	3,510	2,260	1,920	340	310	290	S
Chemistry except biochemistry	9,530	7,150	2,380	1,340	1,080	250	150	140	S
Earth/atmos/ocean sciences	1,580	1,300	280	290	240	50	S	S	S
Physics and astronomy	6,370	5,520	850	640	600	S	110	110	S
Social sciences	6,080	4,290	1,790	2,220	1,430	790	330	270	60
Economics	2,770	2,150	620	510	430	80	S	S	S
Political and related sciences	860	620	240	410	310	100	S	S	S
Sociology	700	380	310	440	250	190	60	S	S
Other social sciences	1,750	1,130	620	860	450	410	210	170	S
Psychology	1,950	650	1,300	2,620	1,220	1,400	410	240	170
Engineering	29,370	27,460	1,920	2,160	1,930	230	190	170	S
Aerospace/aeronautical engineering	860	810	S	80	80	S	S	S	S
Chemical engineering	3,910	3,680	240	230	180	S	S	S	S
Civil engineering	2,440	2,370	70	270	270	S	S	S	S
Electrical/computer engineering	8,810	8,170	640	530	480	60	S	S	S
Materials/metallurgical engineering	3,010	2,730	280	300	270	S	S	S	S
Mechanical engineering	4,670	4,500	170	280	260	S	S	S	S
Other engineering	5,670	5,200	470	460	390	80	80	70	S

See explanatory information and SOURCE at end of table.

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Table 7. Employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1999

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Field of doctorate	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Percent]								
All fields	100.0	75.9	24.1	100.0	75.7	24.3	100.0	64.1	35.9
Sciences	100.0	72.2	27.8	100.0	72.7	27.3	100.0	60.7	39.3
Computer and information sciences	100.0	83.4	16.6	100.0	82.2	17.8	100.0	79.8	S
Mathematical sciences	100.0	86.1	13.9	100.0	87.3	12.7	100.0	80.7	19.3
Biological and agricultural sciences	100.0	72.8	27.2	100.0	74.1	25.9	100.0	66.0	34.0
Agricultural/food sciences	100.0	85.0	15.0	100.0	86.2	13.8	100.0	88.8	S
Biological sciences	100.0	70.5	29.5	100.0	71.8	28.2	100.0	61.7	38.3
Environmental life sciences	100.0	86.2	13.8	100.0	87.1	12.9	100.0	S	S
Health sciences	100.0	44.9	55.1	100.0	43.1	56.9	100.0	49.3	50.7
Physical and related sciences	100.0	87.3	12.7	100.0	88.8	11.2	100.0	83.9	16.1
Chemistry except biochemistry	100.0	83.8	16.2	100.0	85.8	14.2	100.0	82.4	17.6
Earth/atmos/ocean sciences	100.0	85.7	14.3	100.0	86.3	13.7	100.0	67.1	S
Physics and astronomy	100.0	92.9	7.1	100.0	94.2	5.8	100.0	93.0	S
Social sciences	100.0	70.0	30.0	100.0	70.4	29.6	100.0	64.4	35.6
Economics	100.0	83.5	16.5	100.0	84.3	15.7	100.0	84.8	15.2
Political and related sciences	100.0	77.7	22.3	100.0	78.7	21.3	100.0	68.1	31.9
Sociology	100.0	59.7	40.3	100.0	59.9	40.1	100.0	62.4	37.6
Other social sciences	100.0	58.6	41.4	100.0	58.5	41.5	100.0	49.8	50.2
Psychology	100.0	54.3	45.7	100.0	55.6	44.4	100.0	38.4	61.6
Engineering	100.0	93.3	6.7	100.0	93.5	6.5	100.0	90.9	9.1
Aerospace/aeronautical engineering	100.0	96.5	3.5	100.0	97.2	2.8	100.0	94.8	S
Chemical engineering	100.0	92.4	7.6	100.0	92.4	7.6	100.0	75.9	S
Civil engineering	100.0	94.9	5.1	100.0	93.7	6.3	100.0	96.9	S
Electrical/computer engineering	100.0	94.0	6.0	100.0	95.0	5.0	100.0	91.2	S
Materials/metallurgical engineering	100.0	90.0	10.0	100.0	89.8	10.2	100.0	89.4	S
Mechanical engineering	100.0	97.3	2.7	100.0	97.9	2.1	100.0	100.0	S
Other engineering	100.0	91.0	9.0	100.0	91.0	9.0	100.0	89.2	S

See explanatory information and SOURCE at end of table.

Table 7. Employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1999

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Field of doctorate	Asian or Pacific Islander			Hispanic			American Indian/Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Percent]								
All fields	100.0	80.0	20.0	100.0	69.9	30.1	100.0	72.7	27.3
Sciences	100.0	72.3	27.7	100.0	66.4	33.6	100.0	70.6	29.4
Computer and information sciences	100.0	86.2	13.8	100.0	85.9	S	100.0	S	S
Mathematical sciences	100.0	81.2	18.8	100.0	86.5	13.5	100.0	S	S
Biological and agricultural sciences	100.0	66.4	33.6	100.0	69.4	30.6	100.0	67.2	32.8
Agricultural/food sciences	100.0	76.5	23.5	100.0	85.9	14.1	100.0	S	S
Biological sciences	100.0	64.7	35.3	100.0	65.7	34.3	100.0	62.3	37.7
Environmental life sciences	100.0	79.0	21.0	100.0	76.9	S	100.0	S	S
Health sciences	100.0	60.5	39.5	100.0	38.2	61.8	100.0	S	64.9
Physical and related sciences	100.0	79.9	20.1	100.0	84.9	15.1	100.0	93.1	S
Chemistry except biochemistry	100.0	75.1	24.9	100.0	81.2	18.8	100.0	93.1	S
Earth/atmos/ocean sciences	100.0	82.3	17.7	100.0	82.2	17.8	100.0	S	S
Physics and astronomy	100.0	86.7	13.3	100.0	93.9	S	100.0	97.7	S
Social sciences	100.0	70.5	29.5	100.0	64.5	35.5	100.0	82.8	17.2
Economics	100.0	77.7	22.3	100.0	83.7	16.3	100.0	S	S
Political and related sciences	100.0	72.3	27.7	100.0	74.6	25.4	100.0	S	S
Sociology	100.0	55.0	45.0	100.0	57.0	43.0	100.0	S	S
Other social sciences	100.0	64.6	35.4	100.0	52.3	47.7	100.0	85.1	S
Psychology	100.0	33.3	66.7	100.0	46.7	53.3	100.0	58.4	41.6
Engineering	100.0	93.5	6.5	100.0	89.2	10.8	100.0	90.7	S
Aerospace/aeronautical engineering	100.0	94.6	S	100.0	93.0	S	100.0	S	S
Chemical engineering	100.0	94.0	6.0	100.0	79.2	S	100.0	S	S
Civil engineering	100.0	97.2	2.8	100.0	100.0	S	100.0	S	S
Electrical/computer engineering	100.0	92.7	7.3	100.0	89.4	10.6	100.0	S	S
Materials/metallurgical engineering	100.0	90.6	9.4	100.0	88.9	S	100.0	S	S
Mechanical engineering	100.0	96.4	3.6	100.0	95.6	S	100.0	S	S
Other engineering	100.0	91.7	8.3	100.0	83.4	16.6	100.0	96.7	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 8. Employed doctoral scientists and engineers, by field of doctorate and citizenship status: 1999

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Field of doctorate	Total	U.S. citizen			Non-U.S. citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
	[Number]						
All fields	553,360	491,600	429,070	62,530	61,760	47,260	14,510
Sciences	457,470	415,170	374,710	40,460	42,300	32,750	9,550
Computer and information sciences	9,600	6,950	5,660	1,290	2,650	2,050	600
Mathematical sciences	25,300	21,400	18,210	3,200	3,890	2,850	1,040
Biological and agricultural sciences	134,360	121,180	109,500	11,680	13,180	9,840	3,340
Agricultural/food sciences	16,560	14,730	12,900	1,840	1,820	1,330	490
Biological sciences	112,840	101,820	92,190	9,630	11,020	8,250	2,770
Environmental life sciences	4,970	4,630	4,420	220	340	270	70
Health sciences	19,310	17,780	16,170	1,600	1,530	1,140	390
Physical and related sciences	110,300	97,800	85,020	12,780	12,500	9,890	2,600
Chemistry except biochemistry	55,810	49,780	43,380	6,400	6,020	4,720	1,300
Earth/atmos/ocean sciences	15,940	14,390	13,210	1,180	1,550	1,320	230
Physics and astronomy	38,560	33,630	28,430	5,200	4,920	3,850	1,070
Social sciences	74,300	67,600	61,290	6,320	6,700	5,480	1,220
Economics	21,190	18,140	15,970	2,170	3,050	2,320	730
Political and related sciences	16,090	15,170	13,590	1,580	920	790	130
Sociology	13,420	12,780	11,950	830	640	590	50
Other social sciences	23,590	21,510	19,770	1,730	2,090	1,780	310
Psychology	84,300	82,450	78,850	3,600	1,850	1,490	360
Engineering	95,890	76,430	54,370	22,060	19,460	14,510	4,950
Aerospace/aeronautical engineering	4,360	3,720	2,910	810	640	410	230
Chemical engineering	12,520	10,420	7,610	2,810	2,110	1,430	670
Civil engineering	8,700	7,130	4,490	2,640	1,570	1,130	440
Electrical/computer engineering	25,980	20,100	13,820	6,280	5,880	4,370	1,510
Materials/metallurgical engineering	9,970	7,850	5,960	1,890	2,120	1,520	590
Mechanical engineering	12,780	9,480	6,430	3,050	3,300	2,580	720
Other engineering	21,580	17,740	13,160	4,580	3,840	3,050	790

See explanatory information and SOURCE at end of table.

Table 8. Employed doctoral scientists and engineers, by field of doctorate and citizenship status: 1999

Page 2 of 2

Field of doctorate	Total	U.S. citizen			Non-U.S. citizen		
		Total	Native born	Naturalized	Total	Permanent resident	Temporary resident
	[Percent]						
All fields	100.0	88.8	77.5	11.3	11.2	8.5	2.6
Sciences	100.0	90.8	81.9	8.8	9.2	7.2	2.1
Computer and information sciences	100.0	72.4	58.9	13.4	27.6	21.4	6.2
Mathematical sciences	100.0	84.6	72.0	12.6	15.4	11.3	4.1
Biological and agricultural sciences	100.0	90.2	81.5	8.7	9.8	7.3	2.5
Agricultural/food sciences	100.0	89.0	77.9	11.1	11.0	8.0	3.0
Biological sciences	100.0	90.2	81.7	8.5	9.8	7.3	2.5
Environmental life sciences	100.0	93.2	88.8	4.3	6.8	5.3	1.5
Health sciences	100.0	92.1	83.7	8.3	7.9	5.9	2.0
Physical and related sciences	100.0	88.7	77.1	11.6	11.3	9.0	2.4
Chemistry except biochemistry	100.0	89.2	77.7	11.5	10.8	8.5	2.3
Earth/atmos/ocean sciences	100.0	90.3	82.9	7.4	9.7	8.3	1.4
Physics and astronomy	100.0	87.2	73.7	13.5	12.8	10.0	2.8
Social sciences	100.0	91.0	82.5	8.5	9.0	7.4	1.6
Economics	100.0	85.6	75.4	10.2	14.4	11.0	3.4
Political and related sciences	100.0	94.3	84.4	9.8	5.7	4.9	0.8
Sociology	100.0	95.3	89.1	6.2	4.7	4.4	0.4
Other social sciences	100.0	91.2	83.8	7.3	8.8	7.5	1.3
Psychology	100.0	97.8	93.5	4.3	2.2	1.8	0.4
Engineering	100.0	79.7	56.7	23.0	20.3	15.1	5.2
Aerospace/aeronautical engineering	100.0	85.3	66.7	18.5	14.7	9.4	5.3
Chemical engineering	100.0	83.2	60.8	22.4	16.8	11.4	5.4
Civil engineering	100.0	81.9	51.6	30.4	18.1	13.0	5.0
Electrical/computer engineering	100.0	77.4	53.2	24.2	22.6	16.8	5.8
Materials/metallurgical engineering	100.0	78.8	59.8	19.0	21.2	15.3	5.9
Mechanical engineering	100.0	74.2	50.3	23.9	25.8	20.2	5.7
Other engineering	100.0	82.2	61.0	21.2	17.8	14.2	3.6

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 9. Employed doctoral scientists and engineers, by field of doctorate and age: 1999

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Field of doctorate	Total	Under 35	35-39	40-44	45-49	50-54	55-59	60-64	65-75
	[Number]								
All fields	553,360	53,750	79,550	87,400	89,870	90,370	81,360	42,920	28,140
Sciences	457,470	40,470	61,830	71,420	77,620	78,570	68,660	34,700	24,210
Computer and information sciences	9,600	1,460	2,680	2,280	1,800	980	330	S	S
Mathematical sciences	25,300	2,710	3,050	3,360	3,310	4,190	5,120	2,450	1,110
Biological and agricultural sciences	134,360	13,710	20,240	23,530	24,130	20,540	17,800	8,260	6,150
Agricultural/food sciences	16,560	830	2,330	3,410	3,340	2,500	2,190	1,150	800
Biological sciences	112,840	12,670	17,360	19,420	19,750	16,930	14,670	6,890	5,150
Environmental life sciences	4,970	200	540	700	1,040	1,120	940	220	200
Health sciences	19,310	1,160	1,910	2,590	4,110	4,460	3,150	1,280	650
Physical and related sciences	110,300	11,290	17,720	17,470	14,250	16,050	17,090	10,090	6,350
Chemistry except biochemistry	55,810	6,210	9,170	9,330	7,240	7,470	8,390	4,950	3,040
Earth/atmos/ocean sciences	15,940	900	2,470	3,000	2,680	2,750	2,090	1,290	760
Physics and astronomy	38,560	4,170	6,080	5,140	4,330	5,830	6,610	3,840	2,550
Social sciences	74,300	4,310	7,290	9,780	12,780	14,780	13,640	6,930	4,800
Economics	21,190	1,700	2,390	3,210	3,140	3,900	3,630	1,920	1,300
Political and related sciences	16,090	1,170	1,650	1,910	2,490	3,060	3,030	1,410	1,390
Sociology	13,420	710	990	1,370	2,340	2,840	2,640	1,540	1,000
Other social sciences	23,590	730	2,250	3,290	4,810	4,970	4,340	2,070	1,120
Psychology	84,300	5,840	8,940	12,410	17,230	17,580	11,540	5,670	5,100
Engineering	95,890	13,280	17,730	15,980	12,250	11,800	12,700	8,220	3,930
Aerospace/aeronautical engineering	4,360	840	590	500	370	450	620	620	370
Chemical engineering	12,520	1,980	2,300	2,410	1,240	1,410	1,690	1,050	430
Civil engineering	8,700	760	1,430	1,310	1,020	1,300	1,450	900	530
Electrical/computer engineering	25,980	3,840	5,500	4,110	3,170	2,870	3,140	2,420	950
Materials/metallurgical engineering	9,970	1,870	2,090	1,680	1,530	890	1,060	540	300
Mechanical engineering	12,780	1,860	2,500	2,550	1,580	1,790	1,240	820	430
Other engineering	21,580	2,130	3,310	3,420	3,340	3,090	3,500	1,880	910

See explanatory information and SOURCE at end of table.

Table 9. Employed doctoral scientists and engineers, by field of doctorate and age: 1999

Page 2 of 2

Field of doctorate	Total	Under 35	35-39	40-44	45-49	50-54	55-59	60-64	65-75
	[Percent]								
All fields	100.0	9.7	14.4	15.8	16.2	16.3	14.7	7.8	5.1
Sciences	100.0	8.8	13.5	15.6	17.0	17.2	15.0	7.6	5.3
Computer and information sciences	100.0	15.3	27.9	23.8	18.8	10.2	3.4	S	S
Mathematical sciences	100.0	10.7	12.1	13.3	13.1	16.6	20.2	9.7	4.4
Biological and agricultural sciences	100.0	10.2	15.1	17.5	18.0	15.3	13.2	6.1	4.6
Agricultural/food sciences	100.0	5.0	14.1	20.6	20.2	15.1	13.2	6.9	4.8
Biological sciences	100.0	11.2	15.4	17.2	17.5	15.0	13.0	6.1	4.6
Environmental life sciences	100.0	4.1	11.0	14.1	20.9	22.4	19.0	4.4	4.1
Health sciences	100.0	6.0	9.9	13.4	21.3	23.1	16.3	6.6	3.4
Physical and related sciences	100.0	10.2	16.1	15.8	12.9	14.5	15.5	9.1	5.8
Chemistry except biochemistry	100.0	11.1	16.4	16.7	13.0	13.4	15.0	8.9	5.4
Earth/atmos/ocean sciences	100.0	5.7	15.5	18.8	16.8	17.2	13.1	8.1	4.8
Physics and astronomy	100.0	10.8	15.8	13.3	11.2	15.1	17.2	10.0	6.6
Social sciences	100.0	5.8	9.8	13.2	17.2	19.9	18.4	9.3	6.5
Economics	100.0	8.0	11.3	15.1	14.8	18.4	17.1	9.0	6.1
Political and related sciences	100.0	7.2	10.3	11.9	15.4	19.0	18.8	8.8	8.6
Sociology	100.0	5.3	7.4	10.2	17.4	21.1	19.6	11.5	7.4
Other social sciences	100.0	3.1	9.6	13.9	20.4	21.1	18.4	8.8	4.8
Psychology	100.0	6.9	10.6	14.7	20.4	20.9	13.7	6.7	6.0
Engineering	100.0	13.8	18.5	16.7	12.8	12.3	13.2	8.6	4.1
Aerospace/aeronautical engineering	100.0	19.4	13.6	11.5	8.5	10.3	14.1	14.2	8.4
Chemical engineering	100.0	15.8	18.4	19.2	9.9	11.3	13.5	8.4	3.5
Civil engineering	100.0	8.7	16.4	15.0	11.8	15.0	16.7	10.3	6.1
Electrical/computer engineering	100.0	14.8	21.2	15.8	12.2	11.0	12.1	9.3	3.7
Materials/metallurgical engineering	100.0	18.7	21.0	16.9	15.4	9.0	10.6	5.4	3.1
Mechanical engineering	100.0	14.6	19.6	20.0	12.4	14.0	9.7	6.4	3.4
Other engineering	100.0	9.9	15.3	15.8	15.5	14.3	16.2	8.7	4.2

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 10. Employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 1999

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Field of doctorate	Total	5 years or less	6-10 years	11-15 years	16-20 years	21-25 years	More than 25 years
				[Number]			
All fields	553,360	115,990	95,700	80,240	74,190	71,710	115,530
Sciences	457,470	91,170	77,250	67,710	64,770	61,400	95,170
Computer and information sciences	9,600	3,960	3,050	1,490	990	100	S
Mathematical sciences	25,300	4,340	3,780	2,820	2,960	3,680	7,710
Biological and agricultural sciences	134,360	28,470	22,630	20,030	19,640	17,790	25,800
Agricultural/food sciences	16,560	2,750	3,350	2,720	2,580	1,930	3,220
Biological sciences	112,840	24,540	18,620	16,540	16,330	14,920	21,880
Environmental life sciences	4,970	1,170	670	770	720	940	700
Health sciences	19,310	5,660	4,650	3,090	2,500	1,780	1,630
Physical and related sciences	110,300	19,380	17,630	15,370	13,050	14,060	30,810
Chemistry except biochemistry	55,810	9,380	8,940	8,090	6,710	6,710	15,970
Earth/atmos/ocean sciences	15,940	3,090	3,110	2,380	2,180	2,240	2,950
Physics and astronomy	38,560	6,910	5,580	4,900	4,160	5,110	11,900
Social sciences	74,300	14,230	10,460	10,850	11,600	12,210	14,950
Economics	21,190	3,570	2,840	3,320	3,020	3,510	4,950
Political and related sciences	16,090	3,500	2,290	1,980	1,920	2,740	3,670
Sociology	13,420	2,300	1,640	1,970	2,520	2,480	2,510
Other social sciences	23,590	4,870	3,690	3,580	4,150	3,480	3,830
Psychology	84,300	15,120	15,050	14,060	14,020	11,780	14,250
Engineering	95,890	24,820	18,450	12,530	9,420	10,300	20,370
Aerospace/aeronautical engineering	4,360	1,180	570	490	240	440	1,450
Chemical engineering	12,520	2,610	2,340	2,120	1,040	1,470	2,950
Civil engineering	8,700	1,890	1,720	1,240	660	980	2,210
Electrical/computer engineering	25,980	7,500	5,030	3,020	2,240	2,530	5,660
Materials/metallurgical engineering	9,970	3,060	2,180	1,120	1,230	930	1,450
Mechanical engineering	12,780	3,750	2,600	1,910	1,090	1,300	2,140
Other engineering	21,580	4,840	4,010	2,630	2,910	2,680	4,510

See explanatory information and SOURCE at end of table.

Table 10. Employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 1999

Page 2 of 2

Field of doctorate	Total	5 years or less	6-10 years	11-15 years	16-20 years	21-25 years	More than 25 years
	[Percent]						
All fields	100.0	21.0	17.3	14.5	13.4	13.0	20.9
Sciences	100.0	19.9	16.9	14.8	14.2	13.4	20.8
Computer and information sciences	100.0	41.3	31.8	15.6	10.3	1.0	S
Mathematical sciences	100.0	17.2	14.9	11.1	11.7	14.6	30.5
Biological and agricultural sciences	100.0	21.2	16.8	14.9	14.6	13.2	19.2
Agricultural/food sciences	100.0	16.6	20.2	16.4	15.6	11.6	19.5
Biological sciences	100.0	21.7	16.5	14.7	14.5	13.2	19.4
Environmental life sciences	100.0	23.6	13.4	15.4	14.6	18.8	14.2
Health sciences	100.0	29.3	24.1	16.0	13.0	9.2	8.5
Physical and related sciences	100.0	17.6	16.0	13.9	11.8	12.7	27.9
Chemistry except biochemistry	100.0	16.8	16.0	14.5	12.0	12.0	28.6
Earth/atmos/ocean sciences	100.0	19.4	19.5	14.9	13.6	14.1	18.5
Physics and astronomy	100.0	17.9	14.5	12.7	10.8	13.2	30.9
Social sciences	100.0	19.1	14.1	14.6	15.6	16.4	20.1
Economics	100.0	16.8	13.4	15.7	14.2	16.6	23.3
Political and related sciences	100.0	21.7	14.2	12.3	11.9	17.0	22.8
Sociology	100.0	17.1	12.3	14.7	18.8	18.5	18.7
Other social sciences	100.0	20.6	15.6	15.2	17.6	14.8	16.2
Psychology	100.0	17.9	17.9	16.7	16.6	14.0	16.9
Engineering	100.0	25.9	19.2	13.1	9.8	10.7	21.2
Aerospace/aeronautical engineering	100.0	27.0	13.2	11.2	5.5	10.0	33.2
Chemical engineering	100.0	20.8	18.7	16.9	8.3	11.7	23.6
Civil engineering	100.0	21.7	19.8	14.2	7.6	11.2	25.4
Electrical/computer engineering	100.0	28.9	19.4	11.6	8.6	9.7	21.8
Materials/metallurgical engineering	100.0	30.7	21.8	11.3	12.4	9.3	14.5
Mechanical engineering	100.0	29.3	20.3	15.0	8.5	10.1	16.7
Other engineering	100.0	22.4	18.6	12.2	13.5	12.4	20.9

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

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Table 11. Employed doctoral scientists and engineers, by field of doctorate and sector of employment: 1999

Page 1 of 2

Field of doctorate	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
	[Number]								
All fields	553,360	240,080	15,710	185,720	30,400	27,540	37,250	14,870	1,790
Sciences	457,470	213,840	15,240	129,960	27,680	24,540	30,830	13,780	1,600
Computer and information sciences	9,600	3,650	100	5,090	170	230	270	80	S
Mathematical sciences	25,300	14,820	770	7,190	530	610	1,180	170	S
Biological and agricultural sciences	134,360	71,100	3,500	35,210	3,930	6,050	11,290	3,100	180
Agricultural/food sciences	16,560	7,350	450	5,890	770	390	1,410	260	S
Biological sciences	112,840	61,920	2,940	28,250	3,040	5,440	8,870	2,260	120
Environmental life sciences	4,970	1,830	110	1,070	110	210	1,010	590	S
Health sciences	19,310	10,760	410	4,060	990	1,560	1,090	430	S
Physical and related sciences	110,300	37,570	3,210	51,560	2,480	3,860	9,600	1,810	210
Chemistry except biochemistry	55,810	15,560	1,710	32,120	1,250	1,430	2,880	750	110
Earth/atmos/ocean sciences	15,940	7,450	490	4,000	540	620	2,220	620	S
Physics and astronomy	38,560	14,560	1,010	15,440	700	1,810	4,490	440	100
Social sciences	74,300	46,870	2,410	9,420	3,420	4,050	4,250	2,740	1,140
Economics	21,190	12,260	280	3,610	1,000	790	1,890	490	870
Political and related sciences	16,090	10,690	550	1,570	770	730	880	790	110
Sociology	13,420	9,470	470	1,080	420	1,070	520	380	S
Other social sciences	23,590	14,450	1,110	3,170	1,220	1,460	960	1,080	130
Psychology	84,300	29,070	4,830	17,420	16,160	8,190	3,140	5,460	S
Engineering	95,890	26,240	470	55,760	2,720	3,000	6,430	1,090	190
Aerospace/aeronautical engineering	4,360	1,340	S	2,100	230	160	520	S	S
Chemical engineering	12,520	2,270	60	9,010	290	370	450	60	S
Civil engineering	8,700	3,330	S	3,750	240	200	640	470	S
Electrical/computer engineering	25,980	6,600	80	16,280	760	750	1,430	70	S
Materials/metallurgical engineering	9,970	1,630	70	6,980	240	250	690	S	60
Mechanical engineering	12,780	3,490	S	7,750	320	530	600	S	S
Other engineering	21,580	7,590	190	9,890	630	730	2,090	410	S

See explanatory information and SOURCE at end of table.

Table 11. Employed doctoral scientists and engineers, by field of doctorate and sector of employment: 1999

Page 2 of 2

Field of doctorate	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
	[Percent]								
All fields	100.0	43.4	2.8	33.6	5.5	5.0	6.7	2.7	0.3
Sciences	100.0	46.7	3.3	28.4	6.1	5.4	6.7	3.0	0.4
Computer and information sciences	100.0	38.0	1.1	53.0	1.8	2.3	2.9	0.9	S
Mathematical sciences	100.0	58.6	3.0	28.4	2.1	2.4	4.7	0.7	S
Biological and agricultural sciences	100.0	52.9	2.6	26.2	2.9	4.5	8.4	2.3	0.1
Agricultural/food sciences	100.0	44.4	2.7	35.6	4.7	2.4	8.5	1.5	S
Biological sciences	100.0	54.9	2.6	25.0	2.7	4.8	7.9	2.0	0.1
Environmental life sciences	100.0	36.8	2.3	21.5	2.3	4.3	20.3	11.8	S
Health sciences	100.0	55.7	2.1	21.0	5.1	8.1	5.6	2.2	S
Physical and related sciences	100.0	34.1	2.9	46.7	2.3	3.5	8.7	1.6	0.2
Chemistry except biochemistry	100.0	27.9	3.1	57.5	2.2	2.6	5.2	1.3	0.2
Earth/atmos/ocean sciences	100.0	46.8	3.1	25.1	3.4	3.9	13.9	3.9	S
Physics and astronomy	100.0	37.8	2.6	40.1	1.8	4.7	11.7	1.1	0.3
Social sciences	100.0	63.1	3.2	12.7	4.6	5.5	5.7	3.7	1.5
Economics	100.0	57.9	1.3	17.0	4.7	3.7	8.9	2.3	4.1
Political and related sciences	100.0	66.4	3.4	9.7	4.8	4.5	5.5	4.9	0.7
Sociology	100.0	70.6	3.5	8.0	3.1	8.0	3.8	2.8	S
Other social sciences	100.0	61.2	4.7	13.5	5.2	6.2	4.1	4.6	0.6
Psychology	100.0	34.5	5.7	20.7	19.2	9.7	3.7	6.5	S
Engineering	100.0	27.4	0.5	58.2	2.8	3.1	6.7	1.1	0.2
Aerospace/aeronautical engineering	100.0	30.6	S	48.1	5.3	3.6	11.9	S	S
Chemical engineering	100.0	18.1	0.5	72.0	2.3	3.0	3.6	0.4	S
Civil engineering	100.0	38.3	S	43.1	2.8	2.3	7.4	5.4	S
Electrical/computer engineering	100.0	25.4	0.3	62.6	2.9	2.9	5.5	0.3	S
Materials/metallurgical engineering	100.0	16.3	0.7	70.1	2.4	2.5	6.9	S	0.6
Mechanical engineering	100.0	27.3	S	60.7	2.5	4.2	4.7	S	S
Other engineering	100.0	35.2	0.9	45.9	2.9	3.4	9.7	1.9	S

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 12. Employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 1999

Page 1 of 2

Employment sector/field of doctorate	Total	Male	Female	Total	Male	Female
	[Number]			[Percent]		
All sectors	553,360	419,870	133,490	100.0	75.9	24.1
Sciences	457,470	330,360	127,110	100.0	72.2	27.8
Computer and information sciences	9,600	8,000	1,590	100.0	83.4	16.6
Mathematical sciences	25,300	21,780	3,520	100.0	86.1	13.9
Biological and agricultural sciences	134,360	97,850	36,510	100.0	72.8	27.2
Health sciences	19,310	8,680	10,640	100.0	44.9	55.1
Physical and related sciences	110,300	96,250	14,050	100.0	87.3	12.7
Social sciences	74,300	52,030	22,270	100.0	70.0	30.0
Psychology	84,300	45,770	38,530	100.0	54.3	45.7
Engineering	95,890	89,510	6,380	100.0	93.3	6.7
Universities and 4-year colleges	240,080	176,420	63,660	100.0	73.5	26.5
Sciences	213,840	152,280	61,560	100.0	71.2	28.8
Computer and information sciences	3,650	2,830	820	100.0	77.7	22.3
Mathematical sciences	14,820	12,760	2,060	100.0	86.1	13.9
Biological and agricultural sciences	71,100	50,780	20,320	100.0	71.4	28.6
Health sciences	10,760	4,410	6,350	100.0	41.0	59.0
Physical and related sciences	37,570	32,530	5,040	100.0	86.6	13.4
Social sciences	46,870	33,090	13,780	100.0	70.6	29.4
Psychology	29,070	15,880	13,200	100.0	54.6	45.4
Engineering	26,240	24,140	2,100	100.0	92.0	8.0
Other educational institutions	15,710	9,440	6,260	100.0	60.1	39.9
Sciences	15,240	9,070	6,170	100.0	59.5	40.5
Computer and information sciences	100	80	S	100.0	80.3	S
Mathematical sciences	770	500	270	100.0	64.5	35.5
Biological and agricultural sciences	3,500	2,220	1,280	100.0	63.4	36.6
Health sciences	410	80	330	100.0	19.8	80.2
Physical and related sciences	3,210	2,560	650	100.0	79.7	20.3
Social sciences	2,410	1,370	1,040	100.0	56.7	43.3
Psychology	4,830	2,250	2,570	100.0	46.7	53.3
Engineering	470	380	90	100.0	80.7	19.3
Private-for-profit	185,720	155,560	30,160	100.0	83.8	16.2
Sciences	129,960	103,300	26,660	100.0	79.5	20.5
Computer and information sciences	5,090	4,450	640	100.0	87.5	12.5
Mathematical sciences	7,190	6,310	880	100.0	87.8	12.2
Biological and agricultural sciences	35,210	27,470	7,750	100.0	78.0	22.0
Health sciences	4,060	2,430	1,630	100.0	59.9	40.1
Physical and related sciences	51,560	45,150	6,400	100.0	87.6	12.4
Social sciences	9,420	7,190	2,240	100.0	76.3	23.7
Psychology	17,420	10,290	7,130	100.0	59.1	40.9
Engineering	55,760	52,260	3,500	100.0	93.7	6.3
Self-employed	30,400	18,990	11,420	100.0	62.5	37.5
Sciences	27,680	16,320	11,360	100.0	59.0	41.0
Computer and information sciences	170	110	60	100.0	67.4	32.6
Mathematical sciences	530	460	70	100.0	86.3	13.7
Biological and agricultural sciences	3,930	2,820	1,110	100.0	71.8	28.2
Health sciences	990	430	560	100.0	43.6	56.4
Physical and related sciences	2,480	2,280	200	100.0	92.0	8.0
Social sciences	3,420	2,480	940	100.0	72.5	27.5
Psychology	16,160	7,730	8,430	100.0	47.8	52.2
Engineering	2,720	2,660	50	100.0	98.0	2.0

See explanatory information and SOURCE at end of table.

Table 12. Employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 1999

Page 2 of 2

Employment sector/field of doctorate	Total	Male	Female	Total	Male	Female
	[Number]			[Percent]		
Private not-for-profit	27,540	17,960	9,580	100.0	65.2	34.8
Sciences	24,540	15,030	9,510	100.0	61.2	38.8
Computer and information sciences	230	210	S	100.0	91.3	S
Mathematical sciences	610	550	60	100.0	89.7	10.3
Biological and agricultural sciences	6,050	3,880	2,160	100.0	64.2	35.8
Health sciences	1,560	510	1,040	100.0	33.1	66.9
Physical and related sciences	3,860	3,290	570	100.0	85.3	14.7
Social sciences	4,050	2,200	1,850	100.0	54.4	45.6
Psychology	8,190	4,390	3,810	100.0	53.5	46.5
Engineering	3,000	2,930	70	100.0	97.7	2.3
Federal Government	37,250	29,620	7,630	100.0	79.5	20.5
Sciences	30,830	23,610	7,220	100.0	76.6	23.4
Computer and information sciences	270	230	S	100.0	83.3	S
Mathematical sciences	1,180	1,030	150	100.0	87.1	12.9
Biological and agricultural sciences	11,290	8,210	3,080	100.0	72.7	27.3
Health sciences	1,090	600	490	100.0	54.9	45.1
Physical and related sciences	9,600	8,580	1,020	100.0	89.4	10.6
Social sciences	4,250	2,920	1,330	100.0	68.7	31.3
Psychology	3,140	2,040	1,100	100.0	64.9	35.1
Engineering	6,430	6,010	410	100.0	93.6	6.4
State and local government	14,870	10,560	4,320	100.0	71.0	29.0
Sciences	13,780	9,560	4,220	100.0	69.4	30.6
Computer and information sciences	80	80	S	100.0	100.0	S
Mathematical sciences	170	150	S	100.0	90.4	S
Biological and agricultural sciences	3,100	2,350	750	100.0	75.9	24.1
Health sciences	430	200	230	100.0	46.2	53.8
Physical and related sciences	1,810	1,640	170	100.0	90.6	9.4
Social sciences	2,740	1,940	800	100.0	70.9	29.1
Psychology	5,460	3,190	2,270	100.0	58.5	41.5
Engineering	1,090	1,000	90	100.0	91.6	8.4
Other sector	1,790	1,330	460	100.0	74.1	25.9
Sciences	1,600	1,200	410	100.0	74.7	25.3
Computer and information sciences	S	S	S	S	S	S
Mathematical sciences	S	S	S	S	S	S
Biological and agricultural sciences	180	120	70	100.0	63.9	36.1
Health sciences	S	S	S	S	S	S
Physical and related sciences	210	200	S	100.0	98.1	S
Social sciences	1,140	850	290	100.0	74.4	25.6
Psychology	S	S	S	S	S	S
Engineering	190	130	60	100.0	69.5	30.5

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 13. Employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and race/ethnicity: 1999

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Employment sector/field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/ Alaskan Native
	[Number]					
All sectors	553,360	443,120	13,300	81,100	14,020	1,820
Sciences	457,470	380,470	11,780	51,730	11,860	1,630
Computer and information sciences	9,600	6,440	160	2,780	210	S
Mathematical sciences	25,300	19,840	450	4,290	710	S
Biological and agricultural sciences	134,360	110,550	2,740	17,310	3,330	440
Health sciences	19,310	15,800	1,040	1,840	510	120
Physical and related sciences	110,300	88,710	1,540	17,480	2,260	310
Social sciences	74,300	62,590	3,080	6,080	2,220	330
Psychology	84,300	76,550	2,770	1,950	2,620	410
Engineering	95,890	62,650	1,520	29,370	2,160	190
Universities and 4-year colleges	240,080	198,300	7,190	26,270	7,410	920
Sciences	213,840	178,250	6,500	21,630	6,630	840
Computer and information sciences	3,650	2,630	80	860	60	S
Mathematical sciences	14,820	12,060	300	1,940	500	S
Biological and agricultural sciences	71,100	58,060	1,590	9,240	2,050	160
Health sciences	10,760	9,060	600	720	300	80
Physical and related sciences	37,570	31,330	610	4,500	960	170
Social sciences	46,870	39,440	1,990	3,590	1,590	270
Psychology	29,070	25,670	1,320	780	1,180	130
Engineering	26,240	20,050	690	4,640	780	80
Other educational institutions	15,710	13,320	840	1,090	360	100
Sciences	15,240	12,950	800	1,030	360	100
Computer and information sciences	100	80	S	S	S	S
Mathematical sciences	770	570	S	180	S	S
Biological and agricultural sciences	3,500	2,990	140	290	80	S
Health sciences	410	370	S	S	S	S
Physical and related sciences	3,210	2,710	130	280	70	S
Social sciences	2,410	2,050	210	80	60	S
Psychology	4,830	4,170	270	200	130	60
Engineering	470	370	S	60	S	S
Private-for-profit	185,720	135,170	2,520	43,790	3,870	370
Sciences	129,960	103,040	1,870	21,960	2,760	320
Computer and information sciences	5,090	3,110	S	1,800	140	S
Mathematical sciences	7,190	5,110	90	1,870	120	S
Biological and agricultural sciences	35,210	28,840	470	4,910	830	160
Health sciences	4,060	2,960	140	810	120	S
Physical and related sciences	51,560	39,090	650	10,870	870	70
Social sciences	9,420	7,790	200	1,230	200	S
Psychology	17,420	16,140	270	480	480	50
Engineering	55,760	32,120	650	21,820	1,110	50
Self-employed	30,400	27,710	390	1,600	560	150
Sciences	27,680	25,590	380	1,040	540	140
Computer and information sciences	170	140	S	S	S	S
Mathematical sciences	530	470	S	50	S	S
Biological and agricultural sciences	3,930	3,330	S	470	80	S
Health sciences	990	890	60	S	S	S
Physical and related sciences	2,480	2,220	S	230	S	S
Social sciences	3,420	3,170	S	120	90	S
Psychology	16,160	15,370	270	100	320	90
Engineering	2,720	2,120	S	560	S	S

See explanatory information and SOURCE at end of table.

Table 13. Employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and race/ethnicity: 1999

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Employment sector/field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/ Alaskan Native
	[Number]					
Private not-for-profit	27,540	23,460	760	2,710	520	80
Sciences	24,540	21,380	760	1,880	450	70
Computer and information sciences	230	170	S	S	S	S
Mathematical sciences	610	480	S	80	S	S
Biological and agricultural sciences	6,050	5,230	100	610	80	S
Health sciences	1,560	1,360	110	70	S	S
Physical and related sciences	3,860	3,260	S	520	S	S
Social sciences	4,050	3,350	280	360	50	S
Psychology	8,190	7,540	210	180	220	S
Engineering	3,000	2,080	S	840	70	S
Federal Government	37,250	31,840	890	3,670	730	120
Sciences	30,830	26,700	810	2,590	640	80
Computer and information sciences	270	250	S	S	S	S
Mathematical sciences	1,180	1,040	S	90	S	S
Biological and agricultural sciences	11,290	9,410	270	1,400	180	S
Health sciences	1,090	870	80	100	S	S
Physical and related sciences	9,600	8,450	110	760	250	S
Social sciences	4,250	3,740	230	190	80	S
Psychology	3,140	2,920	110	S	70	S
Engineering	6,430	5,140	80	1,080	90	S
State and local government	14,870	12,100	610	1,710	380	80
Sciences	13,780	11,470	580	1,360	310	80
Computer and information sciences	80	60	S	S	S	S
Mathematical sciences	170	70	S	70	S	S
Biological and agricultural sciences	3,100	2,530	120	390	S	S
Health sciences	430	290	S	100	S	S
Physical and related sciences	1,810	1,470	S	300	S	S
Social sciences	2,740	2,330	70	290	S	S
Psychology	5,460	4,720	330	180	200	S
Engineering	1,090	630	S	350	70	S
Other sector	1,790	1,220	100	270	190	S
Sciences	1,600	1,100	90	240	160	S
Computer and information sciences	S	S	S	S	S	S
Mathematical sciences	S	S	S	S	S	S
Biological and agricultural sciences	180	160	S	S	S	S
Health sciences	S	S	S	S	S	S
Physical and related sciences	210	180	S	S	S	S
Social sciences	1,140	720	90	220	110	S
Psychology	S	S	S	S	S	S
Engineering	190	120	S	S	S	S

See explanatory information and SOURCE at end of table.

Table 13. Employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and race/ethnicity: 1999

Employment sector/field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/ Alaskan Native
	[Percent]					
All sectors	100.0	80.1	2.4	14.7	2.5	0.3
Sciences	100.0	83.2	2.6	11.3	2.6	0.4
Computer and information sciences	100.0	67.1	1.7	28.9	2.2	S
Mathematical sciences	100.0	78.4	1.8	17.0	2.8	S
Biological and agricultural sciences	100.0	82.3	2.0	12.9	2.5	0.3
Health sciences	100.0	81.8	5.4	9.5	2.7	0.6
Physical and related sciences	100.0	80.4	1.4	15.8	2.0	0.3
Social sciences	100.0	84.2	4.2	8.2	3.0	0.4
Psychology	100.0	90.8	3.3	2.3	3.1	0.5
Engineering	100.0	65.3	1.6	30.6	2.3	0.2
Universities and 4-year colleges	100.0	82.6	3.0	10.9	3.1	0.4
Sciences	100.0	83.4	3.0	10.1	3.1	0.4
Computer and information sciences	100.0	72.1	2.3	23.5	1.8	S
Mathematical sciences	100.0	81.4	2.0	13.1	3.4	S
Biological and agricultural sciences	100.0	81.7	2.2	13.0	2.9	0.2
Health sciences	100.0	84.2	5.6	6.7	2.8	0.8
Physical and related sciences	100.0	83.4	1.6	12.0	2.6	0.5
Social sciences	100.0	84.1	4.2	7.7	3.4	0.6
Psychology	100.0	88.3	4.5	2.7	4.0	0.4
Engineering	100.0	76.4	2.6	17.7	3.0	0.3
Other educational institutions	100.0	84.8	5.3	6.9	2.3	0.6
Sciences	100.0	85.0	5.3	6.8	2.4	0.6
Computer and information sciences	100.0	74.8	S	S	S	S
Mathematical sciences	100.0	74.5	S	24.0	S	S
Biological and agricultural sciences	100.0	85.4	4.1	8.2	2.2	S
Health sciences	100.0	89.8	S	S	S	S
Physical and related sciences	100.0	84.4	3.9	8.7	2.2	S
Social sciences	100.0	85.1	8.8	3.4	2.5	S
Psychology	100.0	86.4	5.6	4.1	2.6	1.3
Engineering	100.0	79.1	S	12.3	S	S
Private-for-profit	100.0	72.8	1.4	23.6	2.1	0.2
Sciences	100.0	79.3	1.4	16.9	2.1	0.2
Computer and information sciences	100.0	61.1	S	35.3	2.7	S
Mathematical sciences	100.0	71.0	1.2	26.0	1.7	S
Biological and agricultural sciences	100.0	81.9	1.3	13.9	2.4	0.4
Health sciences	100.0	72.9	3.5	19.9	3.0	S
Physical and related sciences	100.0	75.8	1.3	21.1	1.7	0.1
Social sciences	100.0	82.7	2.1	13.0	2.1	S
Psychology	100.0	92.7	1.5	2.8	2.8	0.3
Engineering	100.0	57.6	1.2	39.1	2.0	0.1
Self-employed	100.0	91.2	1.3	5.3	1.8	0.5
Sciences	100.0	92.4	1.4	3.7	1.9	0.5
Computer and information sciences	100.0	83.1	S	S	S	S
Mathematical sciences	100.0	87.9	S	9.5	S	S
Biological and agricultural sciences	100.0	84.9	S	12.0	2.0	S
Health sciences	100.0	89.5	5.5	S	S	S
Physical and related sciences	100.0	89.2	S	9.3	S	S
Social sciences	100.0	92.6	S	3.6	2.7	S
Psychology	100.0	95.2	1.7	0.6	2.0	0.6
Engineering	100.0	78.1	S	20.7	S	S

See explanatory information and SOURCE at end of table.

Table 13. Employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and race/ethnicity: 1999

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Employment sector/field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/ Alaskan Native
	[Percent]					
Private not-for-profit	100.0	85.2	2.8	9.9	1.9	0.3
Sciences	100.0	87.1	3.1	7.6	1.8	0.3
Computer and information sciences	100.0	75.0	S	S	S	S
Mathematical sciences	100.0	78.7	S	12.9	S	S
Biological and agricultural sciences	100.0	86.4	1.7	10.1	1.3	S
Health sciences	100.0	87.1	7.3	4.5	S	S
Physical and related sciences	100.0	84.4	S	13.5	S	S
Social sciences	100.0	82.7	7.0	8.9	1.3	S
Psychology	100.0	92.1	2.6	2.2	2.7	S
Engineering	100.0	69.4	S	27.9	2.3	S
Federal Government	100.0	85.5	2.4	9.9	2.0	0.3
Sciences	100.0	86.6	2.6	8.4	2.1	0.3
Computer and information sciences	100.0	92.6	S	S	S	S
Mathematical sciences	100.0	88.4	S	7.9	S	S
Biological and agricultural sciences	100.0	83.3	2.4	12.4	1.6	S
Health sciences	100.0	80.0	7.1	9.3	S	S
Physical and related sciences	100.0	88.1	1.1	7.9	2.6	S
Social sciences	100.0	88.0	5.5	4.5	1.9	S
Psychology	100.0	93.0	3.4	S	2.1	S
Engineering	100.0	80.0	1.2	16.8	1.4	S
State and local government	100.0	81.3	4.1	11.5	2.5	0.5
Sciences	100.0	83.2	4.2	9.8	2.2	0.5
Computer and information sciences	100.0	65.9	S	S	S	S
Mathematical sciences	100.0	42.3	S	40.2	S	S
Biological and agricultural sciences	100.0	81.5	3.8	12.6	S	S
Health sciences	100.0	67.3	S	22.9	S	S
Physical and related sciences	100.0	81.2	S	16.7	S	S
Social sciences	100.0	85.3	2.4	10.6	S	S
Psychology	100.0	86.5	6.0	3.3	3.7	S
Engineering	100.0	58.0	S	32.1	6.3	S
Other sector	100.0	68.5	5.5	14.9	10.5	S
Sciences	100.0	68.7	5.8	15.1	9.8	S
Computer and information sciences	100.0	S	S	S	S	S
Mathematical sciences	100.0	S	S	S	S	S
Biological and agricultural sciences	100.0	89.6	S	S	S	S
Health sciences	100.0	S	S	S	S	S
Physical and related sciences	100.0	86.2	S	S	S	S
Social sciences	100.0	62.8	7.7	19.0	9.8	S
Psychology	100.0	S	S	S	S	S
Engineering	100.0	66.6	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding. The race/ethnicity data shown are for all doctoral recipients, including temporary residents.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 14. Employed doctoral scientists and engineers, by field of doctorate and primary or secondary work activity: 1999

Page 1 of 2

Field of doctorate	Total number	Research and development: Total	Research and development: Applied research	Research and development: Basic research	Research and development: Development	Research and development: Design	Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
	[Number]										
All fields	553,360	352,430	194,220	140,520	70,480	36,990	179,030	207,720	69,590	90,900	23,550
Sciences	457,470	280,190	151,540	130,040	44,010	19,960	159,720	172,630	49,400	85,870	19,460
Computer and information sciences	9,600	6,540	3,380	2,060	1,190	960	3,120	2,830	4,430	110	180
Mathematical sciences	25,300	16,180	6,330	8,500	1,120	1,780	13,890	6,270	7,280	940	720
Biological and agricultural sciences	134,360	93,910	49,960	54,880	11,690	3,420	41,460	51,350	9,890	18,130	6,030
Agricultural/food sciences	16,560	11,680	8,930	3,500	2,530	480	4,130	6,890	1,400	1,160	1,220
Biological sciences	112,840	78,930	38,370	50,520	8,740	2,750	35,990	42,070	8,150	16,480	4,580
Environmental life sciences	4,970	3,290	2,660	870	420	190	1,350	2,390	340	500	240
Health sciences	19,310	10,730	8,240	2,350	1,620	520	8,220	8,360	950	4,900	720
Physical and related sciences	110,300	79,450	43,030	31,980	22,130	9,550	27,890	40,460	17,180	6,290	4,370
Chemistry except biochemistry	55,810	39,650	23,610	13,740	14,970	3,510	12,630	22,970	4,600	3,500	2,600
Earth/atmos/ocean sciences	15,940	11,580	6,360	6,350	1,200	660	5,200	5,690	2,680	860	530
Physics and astronomy	38,560	28,220	13,070	11,890	5,970	5,390	10,060	11,800	9,900	1,930	1,240
Social sciences	74,300	45,080	24,550	19,850	3,300	1,550	40,320	26,510	5,820	8,750	4,140
Economics	21,190	13,950	9,870	4,340	710	510	10,310	7,480	2,300	2,540	1,070
Political and related sciences	16,090	8,550	3,500	4,710	640	260	9,290	6,460	760	1,820	1,050
Sociology	13,420	8,420	4,490	4,150	360	310	8,000	4,270	970	1,300	720
Other social sciences	23,590	14,160	6,690	6,660	1,590	470	12,710	8,300	1,790	3,090	1,310
Psychology	84,300	28,300	16,050	10,410	2,960	2,180	24,820	36,860	3,850	46,750	3,290
Engineering	95,890	72,240	42,670	10,480	26,470	17,030	19,310	35,080	20,200	5,030	4,090
Aerospace/aeronautical engineering	4,360	3,380	2,000	660	970	630	1,040	1,470	1,180	130	70
Chemical engineering	12,520	9,820	5,840	1,000	4,930	2,300	1,770	4,780	1,900	550	530
Civil engineering	8,700	5,850	3,550	700	1,120	1,710	2,770	3,720	1,650	850	370
Electrical/computer engineering	25,980	19,720	11,090	2,230	7,770	4,970	4,630	9,560	6,620	1,100	880
Materials/metallurgical engineering	9,970	8,010	5,070	1,340	4,600	1,320	1,150	3,590	820	280	590
Mechanical engineering	12,780	9,800	5,580	1,680	3,550	2,560	2,530	4,140	2,880	600	490
Other engineering	21,580	15,670	9,550	2,870	3,530	3,530	5,420	7,830	5,150	1,530	1,160

See explanatory information and SOURCE at end of table.

Table 14. Employed doctoral scientists and engineers, by field of doctorate and primary or secondary work activity: 1999

Page 2 of 2

Field of doctorate	Total number	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Development	Design					
		[Percent]									
All fields	553,360	63.7	35.1	25.4	12.7	6.7	32.4	37.5	12.6	16.4	4.3
Sciences	457,470	61.2	33.1	28.4	9.6	4.4	34.9	37.7	10.8	18.8	4.3
Computer and information sciences	9,600	68.2	35.2	21.5	12.4	10.0	32.5	29.5	46.1	1.1	1.9
Mathematical sciences	25,300	64.0	25.0	33.6	4.4	7.0	54.9	24.8	28.8	3.7	2.8
Biological and agricultural sciences	134,360	69.9	37.2	40.8	8.7	2.5	30.9	38.2	7.4	13.5	4.5
Agricultural/food sciences	16,560	70.6	54.0	21.1	15.3	2.9	24.9	41.6	8.5	7.0	7.3
Biological sciences	112,840	70.0	34.0	44.8	7.7	2.4	31.9	37.3	7.2	14.6	4.1
Environmental life sciences	4,970	66.3	53.6	17.5	8.4	3.8	27.1	48.2	6.8	10.0	4.8
Health sciences	19,310	55.5	42.7	12.2	8.4	2.7	42.6	43.3	4.9	25.4	3.8
Physical and related sciences	110,300	72.0	39.0	29.0	20.1	8.7	25.3	36.7	15.6	5.7	4.0
Chemistry except biochemistry	55,810	71.0	42.3	24.6	26.8	6.3	22.6	41.2	8.2	6.3	4.7
Earth/atmos/ocean sciences	15,940	72.6	39.9	39.8	7.5	4.1	32.6	35.7	16.8	5.4	3.3
Physics and astronomy	38,560	73.2	33.9	30.8	15.5	14.0	26.1	30.6	25.7	5.0	3.2
Social sciences	74,300	60.7	33.0	26.7	4.4	2.1	54.3	35.7	7.8	11.8	5.6
Economics	21,190	65.8	46.6	20.5	3.3	2.4	48.7	35.3	10.9	12.0	5.0
Political and related sciences	16,090	53.1	21.7	29.3	4.0	1.5	57.7	40.1	4.7	11.3	6.5
Sociology	13,420	62.7	33.4	30.9	2.7	2.3	59.6	31.8	7.2	9.7	5.3
Other social sciences	23,590	60.0	28.4	28.2	6.8	2.0	53.9	35.2	7.6	13.1	5.6
Psychology	84,300	33.6	19.0	12.4	3.5	2.6	29.4	43.7	4.6	55.5	3.9
Engineering	95,890	75.3	44.5	10.9	27.6	17.8	20.1	36.6	21.1	5.3	4.3
Aerospace/aeronautical engineering	4,360	77.4	45.9	15.1	22.1	14.5	23.8	33.7	27.0	3.0	1.6
Chemical engineering	12,520	78.4	46.6	8.0	39.4	18.4	14.1	38.2	15.1	4.4	4.2
Civil engineering	8,700	67.2	40.8	8.0	12.9	19.7	31.8	42.7	19.0	9.7	4.2
Electrical/computer engineering	25,980	75.9	42.7	8.6	29.9	19.1	17.8	36.8	25.5	4.2	3.4
Materials/metallurgical engineering	9,970	80.3	50.9	13.4	46.1	13.2	11.5	36.0	8.3	2.8	6.0
Mechanical engineering	12,780	76.7	43.7	13.1	27.8	20.0	19.8	32.4	22.5	4.7	3.8
Other engineering	21,580	72.6	44.2	13.3	16.4	16.3	25.1	36.3	23.9	7.1	5.4

NOTES: Numbers are rounded to nearest ten. Details exceed total due to multiple responses.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 15. Employed doctoral scientists and engineers, by employer location and broad field of doctorate: 1999

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Employer location	Total	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social sciences	Psychology	Engineering
	[Number]									
All locations	553,360	457,470	9,600	25,300	134,360	19,310	110,300	74,300	84,300	95,890
New England	45,830	38,590	640	2,460	11,240	1,510	9,350	6,260	7,120	7,240
Connecticut	9,790	8,660	70	280	2,670	280	2,220	1,230	1,910	1,130
Maine	2,130	1,940	S	70	580	100	360	400	430	190
Massachusetts	27,270	22,630	410	1,770	6,930	830	5,400	3,570	3,730	4,640
New Hampshire	2,280	1,750	110	180	160	80	650	250	320	530
Rhode Island	2,620	2,140	60	140	410	130	510	460	440	480
Vermont	1,730	1,460	S	S	490	100	200	350	300	270
Middle Atlantic	89,740	76,310	1,940	4,240	19,690	2,940	18,600	12,760	16,140	13,430
New Jersey	21,710	17,640	780	1,160	3,900	640	6,180	2,150	2,850	4,060
New York	42,680	37,150	860	2,180	9,580	1,290	7,010	6,850	9,390	5,530
Pennsylvania	25,350	21,520	300	900	6,210	1,020	5,420	3,760	3,910	3,840
East North Central	76,390	61,450	970	3,590	17,140	3,090	14,750	10,390	11,520	14,940
Illinois	22,310	18,510	540	1,090	5,370	790	4,380	3,350	3,000	3,790
Indiana	8,810	7,430	60	550	1,710	460	1,690	1,500	1,460	1,380
Michigan	16,600	12,380	130	710	3,640	490	3,030	1,780	2,600	4,230
Ohio	20,200	15,870	160	850	4,120	970	4,240	2,440	3,080	4,330
Wisconsin	8,460	7,250	70	380	2,310	390	1,410	1,320	1,370	1,210
West North Central	33,620	29,300	470	1,410	10,710	1,370	4,950	4,680	5,720	4,320
Iowa	4,370	3,860	110	320	1,480	130	530	780	520	510
Kansas	3,550	3,120	90	110	1,150	200	330	450	780	430
Minnesota	11,400	9,630	150	360	2,990	660	2,040	1,460	1,960	1,770
Missouri	9,420	8,250	120	410	3,220	180	1,550	1,220	1,550	1,170
Nebraska	1,260	1,120	S	S	510	S	120	150	250	140
North Dakota	2,630	2,410	S	90	1,010	80	280	500	450	220
South Dakota	1,000	910	S	70	350	70	90	120	210	80
South Atlantic	104,570	90,360	1,610	5,450	27,340	4,180	19,780	17,560	14,440	14,220
Delaware	3,680	3,070	70	80	920	110	1,400	270	230	610
District of Columbia	13,830	12,890	120	530	2,200	360	1,910	6,210	1,550	940
Florida	14,640	12,100	260	630	3,220	500	2,140	2,290	3,050	2,540
Georgia	11,040	9,840	220	630	3,110	550	1,890	1,560	1,870	1,200
Maryland	22,340	19,250	380	1,350	7,860	920	4,430	1,940	2,370	3,090
North Carolina	15,700	13,710	250	740	5,340	870	2,790	1,580	2,140	1,990
South Carolina	4,700	3,940	90	200	1,190	240	960	730	540	760
Virginia	16,610	13,840	220	1,240	2,950	520	3,730	2,730	2,450	2,770
West Virginia	2,050	1,730	S	S	570	110	530	250	230	320
East South Central	21,090	17,520	220	1,210	5,750	980	3,660	2,630	3,070	3,580
Alabama	5,770	4,630	50	490	1,510	260	890	580	850	1,140
Kentucky	4,130	3,760	S	380	1,260	240	530	720	580	370
Mississippi	3,100	2,540	60	90	1,060	240	470	390	240	550
Tennessee	8,090	6,580	60	240	1,920	250	1,770	940	1,400	1,510

See explanatory information and SOURCE at end of table.

Table 15. Employed doctoral scientists and engineers, by employer location and broad field of doctorate: 1999

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Employer location	Total	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social sciences	Psychology	Engineering
	[Number]									
West South Central	43,570	34,350	880	1,720	10,650	1,850	8,950	4,650	5,650	9,220
Arkansas	2,700	2,480	S	130	1,110	90	380	390	360	230
Louisiana	5,440	4,610	60	250	1,530	350	1,130	630	660	830
Oklahoma	4,160	3,470	S	100	1,020	230	740	530	800	690
Texas	31,260	23,800	760	1,250	6,990	1,180	6,690	3,110	3,830	7,470
Mountain	36,080	28,760	470	1,490	7,830	940	9,000	4,270	4,760	7,320
Arizona	6,520	4,970	50	160	1,230	240	1,280	1,030	960	1,550
Colorado	11,250	9,460	190	400	2,550	310	2,800	1,310	1,900	1,790
Idaho	2,040	1,560	S	70	670	50	300	170	290	480
Montana	1,520	1,410	S	140	440	S	260	220	280	110
New Mexico	7,630	5,570	100	320	1,080	160	3,020	450	440	2,060
Nevada	1,850	1,520	50	110	430	S	420	210	300	330
Utah	4,540	3,590	S	230	1,230	130	680	760	540	950
Wyoming	740	680	S	50	200	S	230	120	60	50
Pacific	100,690	79,330	2,410	3,680	23,330	2,430	21,050	10,870	15,570	21,360
Alaska	1,180	1,090	S	S	380	S	320	180	160	90
California	77,110	59,090	2,030	2,960	15,830	1,680	17,000	7,640	11,960	18,010
Hawaii	2,500	2,360	S	90	890	70	370	580	340	140
Oregon	6,650	5,570	170	190	2,210	220	1,060	860	860	1,080
Washington	13,250	11,220	160	450	4,030	430	2,290	1,610	2,250	2,030
Puerto Rico	1,230	1,070	S	S	420	S	180	160	250	160
Other U.S. territories and other areas	530	430	S	S	250	S	S	70	S	100

See explanatory information and SOURCE at end of table.

Table 15. Employed doctoral scientists and engineers, by employer location and broad field of doctorate: 1999

Employer location	Total	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social sciences	Psychology	Engineering
	[Percent distribution]									
All locations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
New England	8.3	8.4	6.7	9.7	8.4	7.8	8.5	8.4	8.4	7.6
Connecticut	1.8	1.9	0.7	1.1	2.0	1.5	2.0	1.6	2.3	1.2
Maine	0.4	0.4	S	0.3	0.4	0.5	0.3	0.5	0.5	0.2
Massachusetts	4.9	4.9	4.2	7.0	5.2	4.3	4.9	4.8	4.4	4.8
New Hampshire	0.4	0.4	1.1	0.7	0.1	0.4	0.6	0.3	0.4	0.6
Rhode Island	0.5	0.5	0.6	0.5	0.3	0.7	0.5	0.6	0.5	0.5
Vermont	0.3	0.3	S	S	0.4	0.5	0.2	0.5	0.4	0.3
Middle Atlantic	16.2	16.7	20.2	16.7	14.7	15.2	16.9	17.2	19.2	14.0
New Jersey	3.9	3.9	8.1	4.6	2.9	3.3	5.6	2.9	3.4	4.2
New York	7.7	8.1	9.0	8.6	7.1	6.7	6.4	9.2	11.1	5.8
Pennsylvania	4.6	4.7	3.1	3.6	4.6	5.3	4.9	5.1	4.6	4.0
East North Central	13.8	13.4	10.1	14.2	12.8	16.0	13.4	14.0	13.7	15.6
Illinois	4.0	4.0	5.6	4.3	4.0	4.1	4.0	4.5	3.6	4.0
Indiana	1.6	1.6	0.6	2.2	1.3	2.4	1.5	2.0	1.7	1.4
Michigan	3.0	2.7	1.4	2.8	2.7	2.5	2.7	2.4	3.1	4.4
Ohio	3.7	3.5	1.7	3.4	3.1	5.0	3.8	3.3	3.7	4.5
Wisconsin	1.5	1.6	0.8	1.5	1.7	2.0	1.3	1.8	1.6	1.3
West North Central	6.1	6.4	4.9	5.6	8.0	7.1	4.5	6.3	6.8	4.5
Iowa	0.8	0.8	1.1	1.3	1.1	0.7	0.5	1.0	0.6	0.5
Kansas	0.6	0.7	0.9	0.4	0.9	1.0	0.3	0.6	0.9	0.5
Minnesota	2.1	2.1	1.6	1.4	2.2	3.4	1.8	2.0	2.3	1.9
Missouri	1.7	1.8	1.2	1.6	2.4	0.9	1.4	1.6	1.8	1.2
Nebraska	0.2	0.2	S	S	0.4	S	0.1	0.2	0.3	0.1
North Dakota	0.5	0.5	S	0.4	0.8	0.4	0.3	0.7	0.5	0.2
South Dakota	0.2	0.2	S	0.3	0.3	0.4	0.1	0.2	0.3	0.1
South Atlantic	18.9	19.8	16.7	21.5	20.4	21.6	17.9	23.6	17.1	14.8
Delaware	0.7	0.7	0.7	0.3	0.7	0.6	1.3	0.4	0.3	0.6
District of Columbia	2.5	2.8	1.2	2.1	1.6	1.9	1.7	8.4	1.8	1.0
Florida	2.6	2.6	2.7	2.5	2.4	2.6	1.9	3.1	3.6	2.6
Georgia	2.0	2.2	2.3	2.5	2.3	2.8	1.7	2.1	2.2	1.2
Maryland	4.0	4.2	4.0	5.3	5.9	4.8	4.0	2.6	2.8	3.2
North Carolina	2.8	3.0	2.6	2.9	4.0	4.5	2.5	2.1	2.5	2.1
South Carolina	0.8	0.9	1.0	0.8	0.9	1.2	0.9	1.0	0.6	0.8
Virginia	3.0	3.0	2.3	4.9	2.2	2.7	3.4	3.7	2.9	2.9
West Virginia	0.4	0.4	S	S	0.4	0.6	0.5	0.3	0.3	0.3
East South Central	3.8	3.8	2.3	4.8	4.3	5.1	3.3	3.5	3.6	3.7
Alabama	1.0	1.0	0.5	2.0	1.1	1.3	0.8	0.8	1.0	1.2
Kentucky	0.7	0.8	S	1.5	0.9	1.2	0.5	1.0	0.7	0.4
Mississippi	0.6	0.6	0.6	0.3	0.8	1.2	0.4	0.5	0.3	0.6
Tennessee	1.5	1.4	0.7	1.0	1.4	1.3	1.6	1.3	1.7	1.6

See explanatory information and SOURCE at end of table.

Table 15. Employed doctoral scientists and engineers, by employer location and broad field of doctorate: 1999

Employer location	Total	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social sciences	Psychology	Engineering
	[Percent distribution]									
West South Central	7.9	7.5	9.1	6.8	7.9	9.6	8.1	6.3	6.7	9.6
Arkansas	0.5	0.5	S	0.5	0.8	0.5	0.3	0.5	0.4	0.2
Louisiana	1.0	1.0	0.6	1.0	1.1	1.8	1.0	0.8	0.8	0.9
Oklahoma	0.8	0.8	S	0.4	0.8	1.2	0.7	0.7	1.0	0.7
Texas	5.6	5.2	7.9	4.9	5.2	6.1	6.1	4.2	4.5	7.8
Mountain	6.5	6.3	4.9	5.9	5.8	4.9	8.2	5.7	5.6	7.6
Arizona	1.2	1.1	0.6	0.6	0.9	1.3	1.2	1.4	1.1	1.6
Colorado	2.0	2.1	2.0	1.6	1.9	1.6	2.5	1.8	2.2	1.9
Idaho	0.4	0.3	S	0.3	0.5	0.3	0.3	0.2	0.3	0.5
Montana	0.3	0.3	S	0.6	0.3	S	0.2	0.3	0.3	0.1
New Mexico	1.4	1.2	1.0	1.3	0.8	0.8	2.7	0.6	0.5	2.2
Nevada	0.3	0.3	0.5	0.4	0.3	S	0.4	0.3	0.4	0.3
Utah	0.8	0.8	S	0.9	0.9	0.7	0.6	1.0	0.6	1.0
Wyoming	0.1	0.1	S	0.2	0.1	S	0.2	0.2	0.1	0.1
Pacific	18.2	17.3	25.1	14.6	17.4	12.6	19.1	14.6	18.5	22.3
Alaska	0.2	0.2	S	S	0.3	S	0.3	0.2	0.2	0.1
California	13.9	12.9	21.1	11.7	11.8	8.7	15.4	10.3	14.2	18.8
Hawaii	0.5	0.5	S	0.3	0.7	0.4	0.3	0.8	0.4	0.1
Oregon	1.2	1.2	1.8	0.8	1.6	1.1	1.0	1.2	1.0	1.1
Washington	2.4	2.5	1.7	1.8	3.0	2.2	2.1	2.2	2.7	2.1
Puerto Rico	0.2	0.2	S	S	0.3	S	0.2	0.2	0.3	0.2
Other U.S. territories and other areas	0.1	0.1	S	S	0.2	S	S	0.1	S	0.1

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Since the survey sample design does not include geography, the reliability of estimates in some states may be poor due to small sample size.
Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 16. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, and faculty rank: 1999

Field of doctorate/sex	Total	Full professor	Associate professor	Assistant professor	Instructor/ lecturer	Adjunct faculty	Other faculty	Does not apply
All fields	240,080	84,920	54,220	45,090	6,970	5,330	680	42,870
Male	(73.5)	(86.1)	(72.7)	(62.2)	(56.4)	(60.7)	(89.9)	(65.4)
Female	(26.5)	(13.9)	(27.3)	(37.8)	(43.6)	(39.3)	(10.1)	(34.6)
Sciences	213,840	73,920	48,150	40,680	6,410	4,630	520	39,520
Male	(71.2)	(84.4)	(70.4)	(59.7)	(54.3)	(56.4)	(87.0)	(63.6)
Female	(28.8)	(15.6)	(29.6)	(40.3)	(45.7)	(43.6)	(13.0)	(36.4)
Computer and information sciences	3,650	690	1,410	1,150	90	S	S	270
Male	(77.7)	(7[illegible].5)	(77.1)	(78.7)	(68.4)	S	S	(80.1)
Female	(22.3)	(21.5)	(22.9)	(21.3)	S	S	S	(19.9)
Mathematical sciences	14,820	6,680	4,310	2,450	350	220	S	770
Male	(86.1)	(91.7)	(87.8)	(71.3)	(79.9)	(69.9)	S	(82.1)
Female	(13.9)	(8.3)	(12.2)	(28.7)	(20.1)	(30.1)	S	(17.9)
Biological and agricultural sciences	71,100	21,480	14,280	12,790	2,600	1,080	190	18,670
Male	(71.4)	(85.6)	(75.2)	(64.5)	(51.9)	(62.4)	(87.4)	(60.0)
Female	(28.6)	(14.4)	(24.8)	(35.5)	(48.1)	(37.6)	S	(40.0)
Health sciences	10,760	2,500	3,240	3,270	230	140	S	1,380
Male	(41.0)	(56.5)	(35.3)	(35.2)	(52.1)	S	S	(41.6)
Female	(59.0)	(43.5)	(64.7)	(64.8)	(47.9)	(91.6)	S	(58.4)
Physical and related sciences	37,570	14,080	6,590	5,870	890	730	140	9,280
Male	(86.6)	(94.2)	(85.1)	(75.2)	(80.3)	(78.5)	(88.3)	(84.6)
Female	(13.4)	(5.8)	(14.9)	(24.8)	(19.7)	(21.5)	S	(15.4)
Social sciences	46,870	18,920	12,170	9,080	1,280	1,460	50	3,900
Male	(70.6)	(83.6)	(67.1)	(58.1)	(52.4)	(55.1)	S	(59.3)
Female	(29.4)	(16.4)	(32.9)	(41.9)	(47.6)	(44.9)	S	(40.7)
Psychology	29,070	9,580	6,160	6,070	960	950	90	5,260
Male	(54.6)	(71.6)	(55.2)	(41.7)	(29.5)	(38.5)	(73.6)	(45.1)
Female	(45.4)	(28.4)	(44.8)	(58.3)	(70.5)	(61.5)	S	(54.9)
Engineering	26,240	11,000	6,060	4,410	560	700	150	3,350
Male	(92.0)	(97.8)	(90.5)	(85.2)	(80.0)	(89.3)	(100.0)	(86.7)
Female	(8.0)	(2.2)	(9.5)	(14.8)	(20.0)	(10.7)	S	(13.3)

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Percentage distribution is shown in parentheses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 17. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, faculty rank and years since doctorate: 1999

Field of doctorate/sex	Total		Full professor		Associate professor		Assistant professor		Instructor/lecturer		All other faculty[1]		Does not apply	
	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years
All fields	84,260	155,820	1,810	83,110	12,740	41,470	35,560	9,530	4,140	2,830	2,160	3,840	27,850	15,030
Male	(61.2)	(80.1)	(53.4)	(86.9)	(65.8)	(74.8)	(62.5)	(61.1)	(54.2)	(59.6)	(41.0)	(77.0)	(60.5)	(74.5)
Female	(38.8)	(19.9)	(46.6)	(13.1)	(34.2)	(25.2)	(37.5)	(38.9)	(45.8)	(40.4)	(59.0)	(23.0)	(39.5)	(25.5)
Sciences	75,620	138,220	1,650	72,270	10,710	37,440	31,610	9,070	3,860	2,560	2,020	3,130	25,780	13,740
Male	(58.8)	(78.0)	(51.4)	(85.2)	(62.8)	(72.6)	(59.6)	(59.8)	(52.9)	(56.4)	(40.2)	(72.0)	(58.9)	(72.5)
Female	(41.2)	(22.0)	(48.6)	(14.8)	(37.2)	(27.4)	(40.4)	(40.2)	(47.1)	(43.6)	(59.8)	(28.0)	(41.1)	(27.5)
Computer and information sciences	2,260	1,390	140	540	750	660	1,110	S	S	S	S	S	210	50
Male	(76.2)	(80.1)	(74.8)	(79.4)	(74.5)	(80.0)	(79.3)	S	S	S	S	S	(75.3)	(100.0)
Female	(23.8)	(19.9)	S	(20.6)	(25.5)	(20.0)	(20.7)	S	S	S	S	S	(24.7)	S
Mathematical sciences	3,880	10,940	130	6,550	860	3,450	2,210	240	260	80	S	220	380	390
Male	(72.9)	(90.8)	(72.3)	(92.1)	(83.7)	(88.8)	(69.4)	(88.5)	(77.4)	(87.8)	S	(88.0)	(72.8)	(91.2)
Female	(27.1)	(9.2)	S	(7.9)	(16.3)	(11.2)	(30.6)	S	(22.6)	S	S	S	(27.2)	S
Biological and agricultural sciences	27,400	43,700	290	21,190	2,200	12,070	8,470	4,320	1,720	890	460	810	14,260	4,420
Male	(62.1)	(77.3)	(48.9)	(86.1)	(75.7)	(75.1)	(67.1)	(59.3)	(56.3)	(43.2)	(56.6)	(71.6)	(58.1)	(66.1)
Female	(37.9)	(22.7)	(51.1)	(13.9)	(24.3)	(24.9)	(32.9)	(40.7)	(43.7)	(56.8)	(43.4)	(28.4)	(41.9)	(33.9)
Health sciences	5,660	5,100	220	2,280	1,320	1,920	2,830	440	140	100	130	S	1,010	360
Male	(34.0)	(48.7)	S	(60.9)	(32.6)	(37.2)	(36.3)	(27.9)	(52.8)	S	S	S	(36.3)	(56.3)
Female	(66.0)	(51.3)	(87.7)	(39.1)	(67.4)	(62.8)	(63.7)	(72.1)	(47.2)	S	(100.0)	S	(63.7)	(43.7)
Physical and related sciences	11,890	25,690	140	13,940	1,090	5,490	4,590	1,280	440	450	200	670	5,420	3,860
Male	(77.2)	(90.9)	(57.2)	(94.5)	(74.8)	(87.1)	(76.4)	(70.9)	(79.5)	(81.1)	(43.5)	(91.0)	(79.9)	(91.1)
Female	(22.8)	(9.1)	(42.8)	(5.5)	(25.2)	(12.9)	(23.6)	(29.1)	(20.5)	(18.9)	(56.5)	(9.0)	(20.1)	(8.9)
Social sciences	14,030	32,840	530	18,390	2,950	9,220	7,550	1,540	620	660	780	730	1,600	2,300
Male	(57.0)	(76.4)	(66.8)	(84.1)	(63.0)	(68.3)	(58.3)	(57.4)	(46.8)	(57.6)	(41.1)	(72.8)	(48.8)	(66.6)
Female	(43.0)	(23.6)	(33.2)	(15.9)	(37.0)	(31.7)	(41.7)	(42.6)	(53.2)	(42.4)	(58.9)	(27.2)	(51.2)	(33.4)
Psychology	10,500	18,570	200	9,380	1,530	4,630	4,850	1,220	630	330	400	640	2,900	2,360
Male	(36.0)	(65.1)	S	(72.6)	(43.6)	(59.0)	(37.3)	(58.8)	(22.1)	(43.6)	(34.4)	(45.9)	(33.9)	(58.8)
Female	(64.0)	(34.9)	(75.6)	(27.4)	(56.4)	(41.0)	(62.7)	(41.2)	(77.9)	(56.4)	(65.6)	(54.1)	(66.1)	(41.2)
Engineering	8,640	17,600	160	10,840	2,030	4,030	3,960	460	280	280	140	710	2,060	1,290
Male	(82.0)	(95.9)	(74.5)	(98.1)	(81.5)	(95.0)	(85.0)	(86.9)	(71.4)	(88.9)	(52.3)	(99.1)	(81.0)	(95.7)
Female	(18.0)	(3.1)	S	(1.9)	(18.5)	(5.0)	(15.0)	(13.1)	(28.6)	S	(47.7)	S	(19.0)	(4.3)

[1] 'All other faculty' includes adjunct or other faculty.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Percentage distribution is shown in parentheses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 18. Employed doctoral scientists and engineers in universities and 4-year colleges, *by broad field of doctorate, race/ethnicity, and faculty rank: 1999*

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Field of doctorate and race/ethnicity	Total	Full professor	Associate professor	Assistant professor	Instructor/ lecturer	All other faculty[1]	Does not apply
All fields	240,080	84,920	54,220	45,090	6,970	6,000	42,870
White[2]	(82.6)	(87.9)	(83.7)	(78.7)	(76.6)	(84.5)	(75.5)
Black	(3.0)	(1.9)	(3.9)	(4.3)	(2.6)	(3.4)	(2.8)
Asian/Pacific Islander	(10.9)	(7.6)	(8.7)	(13.1)	(15.2)	(9.5)	(17.6)
Hispanic	(3.1)	(2.2)	(3.3)	(3.5)	(5.1)	(2.5)	(3.9)
American Indian/Alaskan Native	(0.4)	(0.4)	(0.4)	(0.4)	S	S	(0.3)
Sciences	213,840	73,920	48,150	40,680	6,410	5,150	39,520
White[2]	(83.4)	(89.3)	(84.8)	(79.2)	(77.2)	(82.7)	(75.9)
Black	(3.0)	(1.9)	(3.8)	(4.3)	(2.7)	(3.9)	(2.8)
Asian/Pacific Islander	(10.1)	(6.1)	(7.7)	(12.5)	(14.5)	(10.3)	(17.4)
Hispanic	(3.1)	(2.2)	(3.3)	(3.6)	(5.0)	(2.9)	(3.6)
American Indian/Alaskan Native	(0.4)	(0.5)	(0.4)	(0.4)	S	S	(0.3)
Computer and information sciences	3,650	690	1,410	1,150	90	S	270
White[2]	(72.1)	(81.2)	(71.2)	(65.7)	(96.7)	S	(68.9)
Black	(2.3)	S	S	S	S	S	S
Asian/Pacific Islander	(23.5)	(16.1)	(22.6)	(29.8)	S	S	(31.1)
Hispanic	(1.8)	S	S	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S	S	S
Mathematical sciences	14,820	6,680	4,310	2,450	350	260	770
White[2]	(81.4)	(86.2)	(75.8)	(78.8)	(68.2)	(83.8)	(84.5)
Black	(2.0)	(1.8)	(2.1)	(3.5)	S	S	S
Asian/Pacific Islander	(13.1)	(9.0)	(18.0)	(14.0)	(29.0)	S	(10.2)
Hispanic	(3.4)	(3.0)	(4.1)	(3.6)	S	S	S
American Indian/Alaskan Native	S	S	S	S	S	S	S
Biological and agricultural sciences	71,100	21,480	14,280	12,790	2,600	1,270	18,670
White[2]	(81.7)	(90.9)	(86.6)	(80.2)	(71.3)	(85.7)	(69.4)
Black	(2.2)	(1.3)	(2.9)	(2.0)	S	S	(3.1)
Asian/Pacific Islander	(13.0)	(5.9)	(7.7)	(13.9)	(22.0)	(11.8)	(23.3)
Hispanic	(2.9)	(1.7)	(2.8)	(3.5)	(4.9)	S	(3.8)
American Indian/Alaskan Native	(0.2)	S	S	S	S	S	(0.4)
Health sciences	10,760	2,500	3,240	3,270	230	140	1,380
White[2]	(84.2)	(86.9)	(88.6)	(79.0)	(71.5)	(80.3)	(83.6)
Black	(5.6)	(3.2)	(6.1)	(8.3)	S	S	S
Asian/Pacific Islander	(6.7)	(6.4)	(3.1)	(8.6)	S	S	(9.0)
Hispanic	(2.8)	(3.3)	S	(2.8)	S	S	S
American Indian/Alaskan Native	(0.8)	S	S	S	S	S	S
Physical and related sciences	37,570	14,080	6,590	5,870	890	880	9,280
White[2]	(83.4)	(88.4)	(86.9)	(78.7)	(81.6)	(77.8)	(77.0)
Black	(1.6)	(0.9)	(1.6)	(3.5)	S	S	(1.0)
Asian/Pacific Islander	(12.0)	(7.7)	(6.6)	(15.4)	(12.2)	(15.3)	(19.7)
Hispanic	(2.6)	(2.3)	(4.1)	(2.4)	S	S	(2.1)
American Indian/Alaskan Native	(0.5)	(0.8)	S	S	S	S	S
Social sciences	46,870	18,920	12,170	9,080	1,280	1,520	3,900
White[2]	(84.1)	(87.3)	(84.6)	(76.0)	(82.1)	(79.8)	(88.8)
Black	(4.2)	(3.5)	(4.4)	(5.9)	(4.3)	(6.6)	(2.6)
Asian/Pacific Islander	(7.7)	(6.1)	(6.5)	(13.6)	(5.3)	(9.4)	(5.2)
Hispanic	(3.4)	(2.6)	(3.9)	(4.0)	(6.3)	(4.2)	(3.1)
American Indian/Alaskan Native	(0.6)	(0.6)	(0.6)	S	S	S	S

See explanatory information and SOURCE at end of table.

Table 18. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and faculty rank: 1999

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Field of doctorate and race/ethnicity	Total	Full professor	Associate professor	Assistant professor	Instructor/ lecturer	All other faculty[1]	Does not apply
Psychology	29,070	9,580	6,160	6,070	960	1,040	5,260
White[2]	(88.3)	(94.4)	(85.9)	(85.3)	(85.1)	(86.7)	(84.4)
Black	(4.5)	(1.5)	(7.6)	(6.0)	S	S	(5.3)
Asian/Pacific Islander	(2.7)	(1.2)	(3.0)	(3.1)	S	(5.0)	(3.9)
Hispanic	(4.0)	(2.1)	(3.4)	(5.1)	(7.6)	(4.9)	(6.2)
American Indian/Alaskan Native	(0.4)	(0.7)	S	S	S	S	S
Engineering	26,240	11,000	6,060	4,410	560	850	3,350
White[2]	(76.4)	(78.7)	(75.7)	(73.5)	(70.2)	(95.2)	(70.4)
Black	(2.6)	(1.5)	(4.4)	(3.8)	S	S	(2.5)
Asian/Pacific Islander	(17.7)	(17.7)	(16.6)	(19.4)	(23.2)	S	(19.9)
Hispanic	(3.0)	(1.8)	(3.1)	(3.0)	S	S	(6.9)
American Indian/Alaskan Native	(0.3)	S	S	S	S	S	S

[1] 'All other faculty' includes adjunct or other faculty.

[2] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Percentage distribution is shown in parentheses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 19. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, and tenure status: 1999

Field of doctorate/sex	Total	Tenured	Not tenured		Tenure not applicable
			On tenure track	Not on tenure track	
All fields	240,080	124,040	37,390	25,980	52,670
Male	(73.5)	(81.7)	(66.3)	(61.9)	(65.0)
Female	(26.5)	(18.3)	(33.7)	(38.1)	(35.0)
Sciences	213,840	108,840	33,100	23,710	48,190
Male	(71.2)	(79.8)	(63.5)	(60.1)	(62.7)
Female	(28.8)	(20.2)	(36.5)	(39.9)	(37.3)
Computer and information sciences	3,650	1,910	1,100	250	380
Male	(77.7)	(79.3)	(74.6)	(90.1)	(69.9)
Female	(22.3)	(20.7)	(25.4)	S	(30.1)
Mathematical sciences	14,820	10,640	1,840	1,120	1,220
Male	(86.1)	(90.5)	(69.1)	(80.6)	(78.2)
Female	(13.9)	(9.5)	(30.9)	(19.4)	(21.8)
Biological and agricultural sciences	71,100	30,240	10,830	10,060	19,980
Male	(71.4)	(82.3)	(68.4)	(61.4)	(61.6)
Female	(28.6)	(17.7)	(31.6)	(38.6)	(38.4)
Health sciences	10,760	4,650	2,740	1,430	1,940
Male	(41.0)	(46.3)	(38.1)	(35.4)	(36.4)
Female	(59.0)	(53.7)	(61.9)	(64.6)	(63.6)
Physical and related sciences	37,570	18,430	5,120	3,860	10,160
Male	(86.6)	(90.8)	(80.6)	(81.6)	(83.9)
Female	(13.4)	(9.2)	(19.4)	(18.4)	(16.1)
Social sciences	46,870	29,310	7,370	3,390	6,800
Male	(70.6)	(77.2)	(60.4)	(57.4)	(59.5)
Female	(29.4)	(22.8)	(39.6)	(42.6)	(40.5)
Psychology	29,070	13,660	4,100	3,610	7,710
Male	(54.6)	(67.7)	(45.7)	(37.2)	(44.2)
Female	(45.4)	(32.3)	(54.3)	(62.8)	(55.8)
Engineering	26,240	15,200	4,290	2,270	4,480
Male	(92.0)	(95.3)	(88.0)	(81.1)	(90.0)
Female	(8.0)	(4.7)	(12.0)	(18.9)	(10.0)

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Percentage distribution is shown in parentheses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 20. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, tenure status, and years since doctorate: 1999

Field of doctorate/sex	Total		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years
All fields	84,260	155,820	11,580	112,460	28,940	8,450	14,980	11,000	28,760	23,910
Male	(61.2)	(80.1)	(62.7)	(83.6)	(66.5)	(65.5)	(57.1)	(68.5)	(57.3)	(74.3)
Female	(38.8)	(19.9)	(37.3)	(16.4)	(33.5)	(34.5)	(42.9)	(31.5)	(42.7)	(25.7)
Sciences	75,620	138,220	9,900	98,940	25,330	7,770	13,620	10,100	26,770	21,420
Male	(58.8)	(78.0)	(60.0)	(81.7)	(63.6)	(63.1)	(55.8)	(65.9)	(55.4)	(71.8)
Female	(41.2)	(22.0)	(40.0)	(18.3)	(36.4)	(36.9)	(44.2)	(34.1)	(44.6)	(28.2)
Computer and information sciences	2,260	1,390	740	1,170	1,060	S	180	80	290	90
Male	(76.2)	(80.1)	(77.3)	(80.6)	(76.5)	S	(85.9)	(100.0)	(66.0)	(81.6)
Female	(23.8)	(19.9)	(22.7)	(19.4)	(23.5)	S	S	S	(34.0)	S
Mathematical sciences	3,880	10,940	920	9,720	1,630	220	800	310	540	680
Male	(72.9)	(90.8)	(83.9)	(91.2)	(66.6)	(87.2)	(80.4)	(81.1)	(62.0)	(91.0)
Female	(27.1)	(9.2)	(16.1)	(8.8)	(33.4)	S	(19.6)	(18.9)	(38.0)	(9.0)
Biological and agricultural sciences	27,400	43,700	1,680	28,550	6,890	3,940	6,060	4,000	12,770	7,210
Male	(62.1)	(77.3)	(69.4)	(83.1)	(72.8)	(60.8)	(59.4)	(64.5)	(56.6)	(70.4)
Female	(37.9)	(22.7)	(30.6)	(16.9)	(27.2)	(39.2)	(40.6)	(35.5)	(43.4)	(29.6)
Health sciences	5,660	5,100	1,220	3,430	2,260	480	850	580	1,330	610
Male	(34.0)	(48.7)	(29.6)	(52.3)	(39.2)	(33.2)	(24.8)	(50.8)	(35.3)	(39.0)
Female	(66.0)	(51.3)	(70.4)	(47.7)	(60.8)	(66.8)	(75.2)	(49.2)	(64.7)	(61.0)
Physical and related sciences	11,890	25,690	960	17,480	3,820	1,300	2,010	1,840	5,100	5,060
Male	(77.2)	(90.9)	(69.0)	(92.0)	(78.5)	(86.9)	(78.1)	(85.4)	(77.4)	(90.4)
Female	(22.8)	(9.1)	(31.0)	(8.0)	(21.5)	(13.1)	(21.9)	(14.6)	(22.6)	(9.6)
Social sciences	14,030	32,840	3,130	26,180	6,420	950	1,530	1,850	2,950	3,850
Male	(57.0)	(76.4)	(61.1)	(79.2)	(60.1)	(62.5)	(52.8)	(61.3)	(48.3)	(68.2)
Female	(43.0)	(23.6)	(38.9)	(20.8)	(39.9)	(37.5)	(47.2)	(38.7)	(51.7)	(31.8)
Psychology	10,500	18,570	1,250	12,400	3,270	830	2,190	1,430	3,790	3,910
Male	(36.0)	(65.1)	(39.4)	(70.6)	(44.7)	(49.8)	(27.6)	(51.9)	(32.3)	(55.8)
Female	(64.0)	(34.9)	(60.6)	(29.4)	(55.3)	(50.2)	(72.4)	(48.1)	(67.7)	(44.2)
Engineering	8,640	17,600	1,680	13,520	3,600	690	1,370	900	1,990	2,490
Male	(82.0)	(96.9)	(79.1)	(97.3)	(87.2)	(92.3)	(70.8)	(96.6)	(82.8)	(95.7)
Female	(18.0)	(3.1)	(20.9)	(2.7)	(12.8)	(7.7)	(29.2)	S	(17.2)	(4.3)

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Percentage distribution is shown in parentheses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

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Table 21. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and tenure status: 1999

Page 1 of 2

Field of doctorate and race/ethnicity	Total	Tenured	Not tenured: On tenure track	Not tenured: Not on tenure track	Tenure not applicable
All fields	240,080	124,040	37,390	25,980	52,670
White[1]	(82.6)	(86.5)	(78.8)	(77.8)	(78.4)
Black	(3.0)	(2.5)	(4.9)	(3.2)	(2.7)
Asian/Pacific Islander	(10.9)	(8.0)	(12.1)	(15.1)	(15.0)
Hispanic	(3.1)	(2.5)	(3.8)	(3.6)	(3.6)
American Indian/Alaskan Native	(0.4)	(0.4)	(0.4)	(0.4)	(0.3)
Sciences	213,840	108,840	33,100	23,710	48,190
White[1]	(83.4)	(87.8)	(79.2)	(77.8)	(78.9)
Black	(3.0)	(2.6)	(4.8)	(3.3)	(2.8)
Asian/Pacific Islander	(10.1)	(6.6)	(11.5)	(14.9)	(14.6)
Hispanic	(3.1)	(2.5)	(4.0)	(3.6)	(3.5)
American Indian/Alaskan Native	(0.4)	(0.4)	(0.4)	(0.4)	(0.2)
Computer and information sciences	3,650	1,910	1,100	250	380
White[1]	(72.1)	(73.0)	(67.5)	(79.8)	(76.0)
Black	(2.3)	(2.7)	S	S	S
Asian/Pacific Islander	(23.5)	(21.6)	(28.6)	S	(22.8)
Hispanic	(1.8)	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S
Mathematical sciences	14,820	10,640	1,840	1,120	1,220
White[1]	(81.4)	(83.1)	(70.8)	(84.5)	(80.2)
Black	(2.0)	(1.9)	(4.0)	S	S
Asian/Pacific Islander	(13.1)	(11.6)	(20.6)	(11.7)	(16.0)
Hispanic	(3.4)	(3.4)	(4.5)	S	S
American Indian/Alaskan Native	S	S	S	S	S
Biological and agricultural sciences	71,100	30,240	10,830	10,060	19,980
White[1]	(81.7)	(90.0)	(81.4)	(72.4)	(73.8)
Black	(2.2)	(1.8)	(2.3)	(3.1)	(2.3)
Asian/Pacific Islander	(13.0)	(6.0)	(12.7)	(20.1)	(20.1)
Hispanic	(2.9)	(2.0)	(3.1)	(3.8)	(3.6)
American Indian/Alaskan Native	(0.2)	S	S	(0.5)	S
Health sciences	10,760	4,650	2,740	1,430	1,940
White[1]	(84.2)	(89.7)	(77.0)	(81.2)	(83.4)
Black	(5.6)	(3.7)	(11.6)	S	(3.6)
Asian/Pacific Islander	(6.7)	(4.0)	(7.3)	(12.8)	(7.6)
Hispanic	(2.8)	(1.9)	(2.7)	S	(5.2)
American Indian/Alaskan Native	(0.8)	S	S	S	S
Physical and related sciences	37,570	18,430	5,120	3,860	10,160
White[1]	(83.4)	(87.2)	(82.3)	(78.2)	(79.1)
Black	(1.6)	(0.9)	(4.2)	(2.4)	(1.3)
Asian/Pacific Islander	(12.0)	(8.2)	(10.0)	(16.8)	(18.0)
Hispanic	(2.6)	(3.0)	(3.4)	(2.4)	(1.4)
American Indian/Alaskan Native	(0.5)	(0.7)	S	S	S
Social sciences	46,870	29,310	7,370	3,390	6,800
White[1]	(84.1)	(86.2)	(75.9)	(83.1)	(84.6)
Black	(4.2)	(3.9)	(6.5)	(3.4)	(3.9)
Asian/Pacific Islander	(7.7)	(6.3)	(11.9)	(10.2)	(7.7)
Hispanic	(3.4)	(3.0)	(5.1)	(2.4)	(3.6)
American Indian/Alaskan Native	(0.6)	(0.6)	S	S	S

See explanatory information and SOURCE at end of table.

Table 21. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and tenure status: 1999

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Field of doctorate and race/ethnicity	Total	Tenured	Not tenured		Tenure not applicable
			On tenure track	Not on tenure track	
Psychology	29,070	13,660	4,100	3,610	7,710
White[1]	(88.3)	(92.4)	(84.2)	(83.6)	(85.5)
Black	(4.5)	(3.6)	(5.8)	(5.8)	(4.8)
Asian/Pacific Islander	(2.7)	(1.6)	(3.8)	(4.4)	(3.3)
Hispanic	(4.0)	(1.8)	(6.1)	(6.2)	(5.9)
American Indian/Alaskan Native	(0.4)	(0.6)	S	S	S
Engineering	26,240	15,200	4,290	2,270	4,480
White[1]	(76.4)	(77.1)	(75.6)	(78.0)	(74.1)
Black	(2.6)	(2.4)	(5.0)	S	(1.5)
Asian/Pacific Islander	(17.7)	(17.7)	(16.5)	(16.5)	(19.4)
Hispanic	(3.0)	(2.5)	(2.6)	(3.3)	(4.7)
American Indian/Alaskan Native	(0.3)	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Percentage distribution is shown in parentheses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 22. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, primary work activity, and secondary work activity: 1999

Page 1 of 2

Field of doctorate/primary work activity	Total number	Secondary work activity						
		Total	R&D[1]	Teaching	Management, sales and administration	Computer applications	Other activity	No secondary activity
		[Percent]						
All fields	240,080	100.0	42.0	21.1	18.8	5.1	5.8	7.1
R&D	93,330	100.0	25.5	40.8	18.0	6.9	3.6	5.2
Teaching	105,230	100.0	63.3	N/A	14.3	4.8	7.9	9.7
Management, sales, and administration	24,670	100.0	22.0	30.3	35.7	2.4	8.3	1.3
Computer applications	3,590	100.0	53.8	15.9	21.2	N/A	3.1	5.9
Other activities	13,260	100.0	23.7	34.9	27.6	2.0	1.2	10.6
Science	213,840	100.0	40.9	21.2	19.3	5.0	6.2	7.4
R&D	83,730	100.0	24.6	40.7	18.5	6.9	3.9	5.5
Teaching	92,820	100.0	62.0	N/A	14.7	4.6	8.6	10.1
Management, sales, and administration	21,650	100.0	21.9	29.3	36.6	2.3	8.5	1.3
Computer applications	3,050	100.0	51.6	17.8	21.1	N/A	3.6	5.8
Other activities	12,590	100.0	23.5	34.2	28.3	2.1	1.1	10.8
Computer and information sciences	3,650	100.0	48.0	23.1	14.5	11.5	1.6	S
R&D	1,080	100.0	18.6	64.3	7.8	9.3	S	S
Teaching	2,060	100.0	68.1	N/A	11.3	15.6	2.8	S
Management, sales, and administration	280	100.0	S	34.7	55.2	S	S	S
Computer applications	200	100.0	60.5	S	29.0	N/A	S	S
Other activities	S	S	S	S	S	S	S	S
Mathematical sciences	14,820	100.0	48.6	18.5	14.3	7.7	3.4	7.5
R&D	2,940	100.0	10.4	73.0	4.8	9.2	S	1.7
Teaching	10,140	100.0	64.4	N/A	13.1	8.1	4.2	10.1
Management, sales, and administration	1,220	100.0	16.3	31.0	45.1	S	S	S
Computer applications	310	100.0	34.3	43.1	S	N/A	S	S
Other activities	210	100.0	28.4	39.8	S	S	S	S
Biological and agricultural sciences	71,100	100.0	37.9	23.2	21.3	4.3	5.4	7.9
R&D	40,430	100.0	29.5	31.5	22.5	5.7	3.7	7.0
Teaching	18,870	100.0	60.9	N/A	15.5	3.3	9.2	11.1
Management, sales, and administration	6,030	100.0	29.7	26.3	32.6	2.0	8.5	1.0
Computer applications	770	100.0	49.2	10.1	30.5	N/A	S	7.2
Other activities	5,000	100.0	26.5	41.8	18.2	S	S	11.7

See explanatory information and SOURCE at end of table.

Table 22. Employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, primary work activity, and secondary work activity: 1999

Field of doctorate/primary work activity	Total number	Secondary work activity						
		Total	R&D[1]	Teaching	Management, sales and administration	Computer applications	Other activity	No secondary activity
		[Percent]						
Health sciences	10,760	100.0	33.2	21.8	24.2	2.7	14.0	4.1
R&D	3,620	100.0	20.6	43.2	21.1	3.6	9.2	2.3
Teaching	4,770	100.0	49.8	N/A	21.5	2.2	20.3	6.1
Management, sales, and administration	1,540	100.0	13.9	32.8	37.8	3.2	10.7	S
Computer applications	S	S	S	S	S	N/A	S	S
Other activities	800	100.0	29.7	33.3	29.3	S	S	S
Physical and related sciences	37,570	100.0	42.9	19.7	18.0	8.3	3.4	7.7
R&D	15,360	100.0	27.0	38.8	15.7	12.2	1.4	4.9
Teaching	16,450	100.0	60.0	N/A	17.0	6.4	5.0	11.6
Management, sales, and administration	3,520	100.0	28.1	27.6	33.0	4.3	6.0	S
Computer applications	1,270	100.0	60.1	14.6	16.8	N/A	S	5.7
Other activities	980	100.0	37.0	29.5	17.0	S	S	12.1
Social sciences	46,870	100.0	46.2	20.2	15.9	3.9	6.3	7.5
R&D	11,510	100.0	14.2	62.4	10.9	5.9	2.1	4.6
Teaching	27,920	100.0	66.4	N/A	11.8	3.5	8.4	9.9
Management, sales, and administration	6,050	100.0	17.5	31.1	41.8	1.4	6.3	1.8
Computer applications	310	100.0	42.4	39.7	S	N/A	S	S
Other activities	1,080	100.0	26.3	26.8	30.6	8.0	S	8.4
Psychology	29,070	100.0	35.2	20.5	23.0	3.1	11.0	7.2
R&D	8,780	100.0	18.2	42.9	19.8	4.5	10.8	3.7
Teaching	12,610	100.0	58.6	N/A	15.9	2.9	13.1	9.4
Management, sales, and administration	3,000	100.0	15.5	31.0	32.7	2.3	17.8	S
Computer applications	170	100.0	44.1	S	41.7	N/A	S	S
Other activities	4,500	100.0	15.4	28.2	41.7	1.4	1.5	11.8
Engineering	26,240	100.0	51.3	20.9	14.7	5.9	2.7	4.6
R&D	9,590	100.0	33.7	41.7	13.4	7.3	1.6	2.2
Teaching	12,410	100.0	72.5	N/A	11.8	6.0	2.7	7.1
Management, sales, and administration	3,020	100.0	22.6	37.4	29.1	3.0	6.8	S
Computer applications	540	100.0	66.1	S	21.8	N/A	S	S
Other activities	670	100.0	27.6	47.7	15.4	S	S	S

[1] R&D includes basic or applied research, development and design.

KEY: S = Suppressed due to too few cases (fewer than 50 weighted cases).

N/A = Same work activity cannot be reported as both primary and secondary activity except for 'R&D', 'Management', and 'Other activity' because these categories include more than one type of work activity.

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

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Table 23. Doctoral scientists and engineers, by occupation and employment status: 1999

Occupation	All fields	Employed				Unemployed/ seeking work	Retired	Not employed/ not seeking work
		Total	Full time	Part time	Postdoc[1]			
All occupations	626,160	553,360	488,610	40,740	24,020	7,340	53,040	12,410
Scientists	385,730	342,140	293,650	27,100	21,390	3,430	31,890	8,270
Computer and information scientists	34,360	32,740	31,210	1,300	230	310	930	390
Computer/information scientists	27,800	26,550	25,260	1,060	230	220	690	340
Postsecondary teachers, computer sciences	6,570	6,190	5,960	230	S	90	240	S
Mathematical scientists	22,450	19,650	17,710	1,230	700	170	2,210	420
Mathematical scientists	7,270	6,410	5,870	220	320	100	550	210
Postsecondary teachers, math sciences	15,180	13,230	11,840	1,020	380	70	1,660	210
Life and related scientists	118,310	104,030	84,780	4,530	14,730	1,100	10,300	2,880
Agricultural scientists	10,080	8,560	7,650	540	370	100	1,290	130
Biological scientists	66,010	58,160	42,020	2,090	14,060	850	4,790	2,210
Forestry and conservation scientists	1,460	1,190	1,040	80	70	S	220	S
Postsecondary teachers, life and related sciences	40,770	36,130	34,060	1,830	230	130	4,010	510
Physical and related scientists	87,660	75,350	67,610	4,030	3,710	960	9,610	1,740
Chemists, except biochemistry	30,000	24,840	22,400	1,060	1,380	610	3,880	660
Earth scientists	11,010	9,630	8,460	590	570	120	1,040	230
Physics and astronomers	15,310	13,460	11,250	670	1,550	S	1,520	300
Other physical scientists	1,610	1,330	1,180	110	S	S	190	60
Postsecondary teachers, physical and related sciences	29,720	26,070	24,320	1,600	160	170	2,990	490
Social scientists	51,910	45,460	41,140	3,700	620	310	5,230	920
Economists	8,140	6,970	6,480	390	110	60	900	200
Political scientists	1,340	1,060	990	S	S	S	260	S
Sociologists and anthropologists	4,450	3,560	2,940	400	220	50	690	150
S&T historians and other social scientists	2,510	2,200	1,860	240	100	S	150	120
Postsecondary teachers, social sciences	35,470	31,670	28,880	2,640	150	150	3,220	430
Psychologists	71,020	64,910	51,200	12,300	1,410	580	3,610	1,920
Psychologists	53,150	48,580	36,100	11,170	1,310	420	2,520	1,630
Postsecondary teachers, psychology	17,870	16,320	15,100	1,130	90	160	1,100	290
Engineers	83,850	74,600	70,700	2,730	1,170	1,340	7,300	610
Aerospace/aeronautical engineers	4,720	4,070	3,840	190	S	110	470	80
Chemical engineers	8,960	7,610	7,310	170	120	230	1,020	110
Civil and architectural engineers	4,370	4,150	3,730	280	130	S	200	S
Electrical and related engineers	16,650	15,350	14,830	380	140	250	970	80
Materials/metallurgical engineers	1,100	1,050	980	70	S	S	S	S
Mechanical engineers	9,570	8,610	8,210	250	140	150	780	S
Other engineers	19,480	16,690	15,440	690	560	490	2,080	220
Postsecondary teachers, engineering	19,000	17,080	16,360	700	S	60	1,770	80
Non-S&E occupations	156,590	136,630	124,260	10,910	1,460	2,570	13,850	3,540
Top/mid-level managers, administrators, etc.	75,340	66,070	63,540	2,470	60	980	7,470	830
Health and related occupations	18,970	17,270	14,810	1,540	930	350	1,000	350
Teachers, except S&E postsecondary teachers	26,670	23,700	21,610	1,970	120	140	2,250	580
Social services and related occupations	2,810	2,350	1,950	380	S	S	270	170
Technicians/technologists	8,640	7,530	6,810	540	170	330	600	190
Sales and marketing occupations	7,320	6,190	5,110	1,080	S	290	580	260
Other non-S&E occupations	16,840	13,520	10,430	2,930	150	480	1,680	1,170

[1] Postdoc is a temporary position awarded in academe, industry or government primarily for gaining additional education and training in research.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T = science and technology. S&E = science and engineering.

NOTES: If the respondent was unemployed during the survey reference period, occupation of last job was reported. Numbers are rounded to nearest ten. Details may not add to total because of rounding. Excludes estimated 540 individuals who reported never having worked.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 24. Doctoral scientists and engineers, by broad occupation, employment status, and sex: 1999

Page 1 of 2

Employment status/occupation	Total	Male	Female
All occupations	626,160	476,290	149,870
Employed full time	511,620	397,630	113,990
Employed part time	41,740	22,240	19,500
Unemployed, seeking work	7,340	5,180	2,170
Retired	53,040	46,670	6,370
Not employed, not seeking work	12,410	4,570	7,840
Scientists	385,730	283,920	101,810
Employed full time	314,170	237,960	76,210
Employed part time	27,970	13,410	14,560
Unemployed, seeking work	3,430	2,200	1,230
Retired	31,890	27,690	4,200
Not employed, not seeking work	8,270	2,670	5,600
Computer and information scientists	34,360	29,970	4,400
Employed full time	31,430	27,630	3,800
Employed part time	1,310	890	420
Unemployed, seeking work	310	280	S
Retired	930	890	S
Not employed, not seeking work	390	270	110
Mathematical scientists	22,450	18,480	3,980
Employed full time	18,330	15,190	3,140
Employed part time	1,310	880	430
Unemployed, seeking work	170	130	S
Retired	2,210	2,040	170
Not employed, not seeking work	420	240	190
Life and related scientists	118,310	85,120	33,200
Employed full time	99,200	72,360	26,850
Employed part time	4,830	2,430	2,400
Unemployed, seeking work	1,100	620	480
Retired	10,300	8,790	1,510
Not employed, not seeking work	2,880	920	1,960

See explanatory information and SOURCE at end of table.

Table 24. Doctoral scientists and engineers, by broad occupation, employment status, and sex: 1999

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Employment status/occupation	Total	Male	Female
Physical and related scientists	87,660	76,240	11,420
Employed full time	71,170	62,390	8,780
Employed part time	4,170	3,250	920
Unemployed, seeking work	960	850	100
Retired	9,610	9,020	590
Not employed, not seeking work	1,740	730	1,010
Social scientists	51,910	37,270	14,640
Employed full time	41,710	30,330	11,380
Employed part time	3,750	2,040	1,710
Unemployed, seeking work	310	150	150
Retired	5,230	4,550	680
Not employed, not seeking work	920	200	710
Psychologists	71,020	36,840	34,180
Employed full time	52,310	30,060	22,250
Employed part time	12,600	3,920	8,670
Unemployed, seeking work	580	150	430
Retired	3,610	2,400	1,210
Not employed, not seeking work	1,920	310	1,620
Engineers	83,850	78,110	5,740
Employed full time	71,830	66,920	4,910
Employed part time	2,770	2,390	380
Unemployed, seeking work	1,340	1,180	170
Retired	7,300	7,290	S
Not employed, not seeking work	610	340	270
Non-S&E occupations	156,590	114,260	42,320
Employed full time	125,630	92,750	32,870
Employed part time	11,000	6,440	4,560
Unemployed, seeking work	2,570	1,800	770
Retired	13,850	11,690	2,160
Not employed, not seeking work	3,540	1,570	1,970

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&E = science and engineering.

NOTES: If the respondent was unemployed during the survey reference period, occupation of last job was reported.

Numbers are rounded to nearest ten. Details may not add to total because of rounding.

Excludes 540 individuals who reported never having worked.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients.

Table 25. Doctoral scientists and engineers, by broad occupation, employment status, and race/ethnicity: 1999

Page 1 of 2

Employment status/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
All occupations	626,160	508,250	14,190	86,680	14,990	2,050
Employed full time	511,620	406,150	12,460	78,450	12,830	1,730
Employed part time	41,740	36,970	840	2,650	1,180	100
Unemployed, seeking work	7,340	5,790	150	1,220	120	50
Retired	53,040	48,810	450	3,040	600	150
Not employed, not seeking work	12,410	10,520	290	1,320	250	S
Scientists	385,730	319,630	7,990	46,650	10,050	1,400
Employed full time	314,170	255,550	6,920	42,050	8,450	1,200
Employed part time	27,970	24,770	550	1,680	890	80
Unemployed, seeking work	3,430	2,850	90	360	110	S
Retired	31,890	29,480	260	1,660	420	80
Not employed, not seeking work	8,270	6,980	180	900	180	S
Computer and information scientists	34,360	23,020	390	10,130	780	S
Employed full time	31,430	20,480	380	9,810	730	S
Employed part time	1,310	1,180	S	110	S	S
Unemployed, seeking work	310	240	S	60	S	S
Retired	930	780	S	100	S	S
Not employed, not seeking work	390	340	S	S	S	S
Mathematical scientists	22,450	17,960	430	3,390	660	S
Employed full time	18,330	14,500	320	2,940	550	S
Employed part time	1,310	940	80	270	S	S
Unemployed, seeking work	170	160	S	S	S	S
Retired	2,210	1,980	S	130	80	S
Not employed, not seeking work	420	370	S	S	S	S
Life and related scientists	118,310	96,910	1,920	15,930	3,160	400
Employed full time	99,200	80,170	1,700	14,310	2,670	360
Employed part time	4,830	4,080	130	460	160	S
Unemployed, seeking work	1,100	880	S	160	50	S
Retired	10,300	9,450	S	590	180	S
Not employed, not seeking work	2,880	2,330	S	420	90	S

See explanatory information and SOURCE at end of table.

Table 25. Doctoral scientists and engineers, by broad occupation, employment status, and race/ethnicity: 1999

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Employment status/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
Physical and related scientists	87,660	72,840	1,190	11,580	1,780	280
Employed full time	71,170	57,900	1,080	10,330	1,590	270
Employed part time	4,170	3,680	60	330	100	S
Unemployed, seeking work	960	790	S	130	S	S
Retired	9,610	9,040	S	510	60	S
Not employed, not seeking work	1,740	1,430	S	280	S	S
Social scientists	51,910	43,800	2,060	4,170	1,540	330
Employed full time	41,710	35,010	1,640	3,490	1,310	250
Employed part time	3,750	3,100	160	320	140	S
Unemployed, seeking work	310	210	S	S	S	S
Retired	5,230	4,760	140	270	S	S
Not employed, not seeking work	920	720	80	80	S	S
Psychologists	71,020	65,090	2,000	1,450	2,140	340
Employed full time	52,310	47,490	1,790	1,160	1,580	290
Employed part time	12,600	11,780	120	190	460	S
Unemployed, seeking work	580	560	S	S	S	S
Retired	3,610	3,470	S	50	50	S
Not employed, not seeking work	1,920	1,790	50	S	S	S
Engineers	83,850	58,480	1,270	22,240	1,720	150
Employed full time	71,830	48,240	1,150	20,790	1,530	120
Employed part time	2,770	2,450	S	200	90	S
Unemployed, seeking work	1,340	930	S	410	S	S
Retired	7,300	6,410	S	790	80	S
Not employed, not seeking work	610	460	70	60	S	S
Non-S&E occupations	156,590	130,140	4,930	17,790	3,220	510
Employed full time	125,630	102,360	4,390	15,620	2,860	400
Employed part time	11,000	9,760	250	770	210	S
Unemployed, seeking work	2,570	2,020	60	450	S	S
Retired	13,850	12,920	190	600	100	S
Not employed, not seeking work	3,540	3,080	S	350	50	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&E = science and engineering.

NOTES: If the respondent was unemployed during the survey reference period, occupation of last job was reported. The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Numbers are rounded to nearest ten. Details may not add to total because of rounding. Excludes 540 individuals who reported never having worked.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 26. Selected employment characteristics of doctoral scientists and engineers, by occupation: 1999

Occupation	Unemployment rate	Involuntarily out-of-field rate	Labor force participation rate
	[percent]		
All occupations	1.3	4.3	89.5
Scientists	1.0	3.2	89.6
Computer and information scientists	0.9	13.6	96.2
Computer/information scientists	0.8	16.0	96.3
Postsecondary teachers, computer sciences	1.5	3.1	95.7
Mathematical scientists	0.9	2.9	88.3
Mathematical scientists	1.5	4.3	89.5
Postsecondary teachers, math sciences	0.6	2.3	87.7
Life and related scientists	1.0	1.1	88.9
Agricultural scientists	1.2	1.4	85.9
Biological scientists	1.4	1.1	89.4
Forestry and conservation scientists	S	S	83.2
Postsecondary teachers, life and related sciences	0.4	1.0	88.9
Physical and related scientists	1.3	2.5	87.0
Chemists, except biochemistry	2.4	2.2	84.9
Earth scientists	1.3	2.7	88.5
Physics and astronomers	S	3.6	88.1
Other physical scientists	S	S	84.7
Postsecondary teachers, physical and related sciences	0.6	2.1	88.3
Social scientists	0.7	2.7	88.2
Economists	0.9	1.1	86.4
Political scientists	S	S	79.2
Sociologists and anthropologists	1.5	2.2	81.1
S&T historians and other social scientists	S	2.8	89.3
Postsecondary teachers, social sciences	0.5	3.1	89.7
Psychologists	0.9	2.7	92.2
Psychologists	0.9	3.0	92.2
Postsecondary teachers, psychology	1.0	1.9	92.3
Engineers	1.8	3.0	90.6
Aerospace/aeronautical engineers	2.6	6.0	88.5
Chemical engineers	3.0	2.7	87.4
Civil and architectural engineers	S	2.7	95.4
Electrical and related engineers	1.6	4.5	93.7
Materials/metallurgical engineers	S	7.7	98.4
Mechanical engineers	1.7	2.7	91.4
Other engineers	2.8	3.2	88.2
Postsecondary teachers, engineering	0.4	0.8	90.3
Non-S&E occupations	1.8	7.9	88.9
Top/mid-level managers, administrators, etc	1.5	5.0	89.0
Health and related occupations	2.0	6.9	92.9
Teachers, except S&E postsecondary teachers	0.6	4.0	89.4
Social services and related occupations	S	11.3	84.1
Technicians/technologists	4.2	16.1	90.9
Sales and marketing occupations	4.5	22.0	88.6
Other non-S&E occupations	3.4	18.3	83.1

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES: If the respondent was unemployed during the survey reference period, occupation of last job was reported. Labor force is defined as those employed (E) plus those unemployed and seeking work (U). Population (P) is defined as all S&E doctorate holders under age 76, residing in U.S. during the week of April 15, 1999, who earned their doctorate from U.S. institutions. The labor force participation rate (R_{LF}) is the ratio of the labor force to the population: $R_{LF} = (E+U)/P$. The unemployment rate (R_U) is the ratio of those who are unemployed but seeking employment (U) to the total labor force (E+U): $R_U = U/(E+U)$. Involuntary-out-of field rate is the percent of employed individuals who reported they were working part-time exclusively because suitable full-time work was not available and/or working in an area not related to the first doctoral degree (in their principal job) at least partially because suitable work in the field was not available.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

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Table 27. Doctoral scientists and engineers, by occupation and sex: 1999

Occupation	Total	Male	Female	Total	Male	Female
	Number			Percent		
All occupations	626,160	476,290	149,870	100.0	76.1	23.9
Scientists	385,730	283,920	101,810	100.0	73.6	26.4
Computer and information scientists	34,360	29,970	4,400	100.0	87.2	12.8
Computer/information scientists	27,800	24,510	3,290	100.0	88.2	11.8
Postsecondary teachers, computer sciences	6,570	5,460	1,110	100.0	83.1	16.9
Mathematical scientists	22,450	18,480	3,980	100.0	82.3	17.7
Mathematical scientists	7,270	5,660	1,620	100.0	77.8	22.2
Postsecondary teachers, math sciences	15,180	12,820	2,360	100.0	84.4	15.6
Life and related scientists	118,310	85,120	33,200	100.0	71.9	28.1
Agricultural scientists	10,080	8,580	1,500	100.0	85.1	14.9
Biological scientists	66,010	44,510	21,490	100.0	67.4	32.6
Forestry and conservation scientists	1,460	1,210	240	100.0	83.2	16.8
Postsecondary teachers, life and related sciences	40,770	30,820	9,960	100.0	75.6	24.4
Physical and related scientists	87,660	76,240	11,420	100.0	87.0	13.0
Chemists, except biochemistry	30,000	25,310	4,690	100.0	84.4	15.6
Earth scientists	11,010	9,820	1,190	100.0	89.2	10.8
Physics and astronomers	15,310	14,280	1,030	100.0	93.3	6.7
Other physical scientists	1,610	1,340	270	100.0	83.1	16.9
Postsecondary teachers, physical and related sciences	29,720	25,490	4,230	100.0	85.8	14.2
Social scientists	51,910	37,270	14,640	100.0	71.8	28.2
Economists	8,140	6,240	1,900	100.0	76.7	23.3
Political scientists	1,340	980	370	100.0	72.6	27.4
Sociologists and anthropologists	4,450	2,280	2,170	100.0	51.3	48.7
S&T historians and other social scientists	2,510	1,410	1,100	100.0	56.4	43.6
Postsecondary teachers, social sciences	35,470	26,360	9,110	100.0	74.3	25.7
Psychologists	71,020	36,840	34,180	100.0	51.9	48.1
Psychologists	53,150	26,320	26,830	100.0	49.5	50.5
Postsecondary teachers, psychology	17,870	10,520	7,350	100.0	58.9	41.1
Engineers	83,850	78,110	5,740	100.0	93.2	6.8
Aerospace/aeronautical engineers	4,720	4,500	230	100.0	95.2	4.8
Chemical engineers	8,960	8,170	800	100.0	91.1	8.9
Civil and architectural engineers	4,370	4,180	190	100.0	95.7	4.3
Electrical and related engineers	16,650	15,700	950	100.0	94.3	5.7
Materials/metallurgical engineers	1,100	930	170	100.0	84.6	15.4
Mechanical engineers	9,570	9,250	320	100.0	96.7	3.3
Other engineers	19,480	17,770	1,710	100.0	91.2	8.8
Postsecondary teachers, engineering	19,000	17,620	1,380	100.0	92.7	7.3
Non-S&E occupations	156,590	114,260	42,320	100.0	73.0	27.0
Top/mid-level managers, administrators, etc.	75,340	61,360	13,980	100.0	81.4	18.6
Health and related occupations	18,970	12,710	6,260	100.0	67.0	33.0
Teachers, except S&E postsecondary teachers	26,670	14,110	12,560	100.0	52.9	47.1
Social services and related occupations	2,810	1,790	1,020	100.0	63.7	36.3
Technicians/technologists	8,640	7,470	1,170	100.0	86.4	13.6
Sales and marketing occupations	7,320	5,500	1,820	100.0	75.2	24.8
Other non-S&E occupations	16,840	11,330	5,510	100.0	67.3	32.7

KEY: S&T=science and technology. S&E=science and engineering.

NOTES: If the respondent was unemployed during the survey reference period, occupation of last job was reported. Numbers are rounded to nearest ten. Details may not add to total because of rounding. Excludes estimated 540 individuals who reported never having worked.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 28. Doctoral scientists and engineers, by occupation and race/ethnicity: 1999

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Occupation	Total	White[1]	Black	Asian/Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Number]					
All occupations	626,160	508,250	14,190	86,680	14,990	2,050
Scientists	385,730	319,630	7,990	46,650	10,050	1,400
Computer and information scientists	34,360	23,020	390	10,130	780	S
Computer/information scientists	27,800	17,880	230	8,990	670	S
Postsecondary teachers, computer sciences	6,570	5,140	160	1,140	100	S
Mathematical scientists	22,450	17,960	430	3,390	660	S
Mathematical scientists	7,270	5,560	150	1,400	150	S
Postsecondary teachers, math sciences	15,180	12,400	270	1,990	510	S
Life and related scientists	118,310	96,910	1,920	15,930	3,160	400
Agricultural scientists	10,080	8,470	200	940	420	S
Biological scientists	66,010	51,030	910	12,000	1,820	240
Forestry and conservation scientists	1,460	1,300	S	90	S	S
Postsecondary teachers, life and related sciences	40,770	36,120	790	2,890	890	90
Physical and related scientists	87,660	72,840	1,190	11,580	1,780	280
Chemists, except biochemistry	30,000	22,950	420	6,060	540	S
Earth scientists	11,010	9,610	S	1,130	190	S
Physics and astronomers	15,310	12,960	140	1,980	200	S
Other physical scientists	1,610	1,420	S	140	S	S
Postsecondary teachers, physical and related sciences	29,720	25,900	550	2,250	840	180
Social scientists	51,910	43,800	2,060	4,170	1,540	330
Economists	8,140	6,570	150	1,160	200	S
Political scientists	1,340	1,210	S	70	S	S
Sociologists and anthropologists	4,450	4,020	150	170	100	S
S&T historians and other social scientists	2,510	2,110	100	220	S	S
Postsecondary teachers, social sciences	35,470	29,890	1,650	2,550	1,160	230
Psychologists	71,020	65,090	2,000	1,450	2,140	340
Psychologists	53,150	49,040	1,270	1,050	1,510	280
Postsecondary teachers, psychology	17,870	16,050	730	400	630	60
Engineers	83,850	58,480	1,270	22,240	1,720	150
Aerospace/aeronautical engineers	4,720	3,620	50	990	60	S
Chemical engineers	8,960	5,920	120	2,780	130	S
Civil and architectural engineers	4,370	2,700	S	1,370	240	S
Electrical and related engineers	16,650	10,390	250	5,740	230	50
Materials/metallurgical engineers	1,100	860	S	190	S	S
Mechanical engineers	9,570	5,880	60	3,480	140	S
Other engineers	19,480	14,230	230	4,600	370	S
Postsecondary teachers, engineering	19,000	14,880	510	3,090	500	S
Non-S&E occupations	156,590	130,140	4,930	17,790	3,220	510
Top/mid-level managers, administrators, etc	75,340	63,460	2,310	7,760	1,550	270
Health and related occupations	18,970	14,980	690	2,860	370	70
Teachers, except S&E postsecondary teachers	26,670	22,860	1,290	1,770	640	110
Social services and related occupations	2,810	2,270	220	230	80	S
Technicians/technologists	8,640	5,840	60	2,590	120	S
Sales and marketing occupations	7,320	5,710	120	1,300	190	S
Other non-S&E occupations	16,840	15,030	240	1,270	280	S

See explanatory information and SOURCE at end of table.

Table 28. Doctoral scientists and engineers, by occupation and race/ethnicity: 1999

Occupation	Total	White[1]	Black	Asian/Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Percent]					
All occupations	100.0	81.2	2.3	13.8	2.4	0.3
Scientists	100.0	82.9	2.1	12.1	2.6	0.4
Computer and information scientists	100.0	67.0	1.1	29.5	2.3	S
Computer/information scientists	100.0	64.3	0.8	32.4	2.4	S
Postsecondary teachers, computer sciences	100.0	78.2	2.5	17.4	1.6	S
Mathematical scientists	100.0	80.0	1.9	15.1	2.9	S
Mathematical scientists	100.0	76.4	2.1	19.3	2.1	S
Postsecondary teachers, math sciences	100.0	81.7	1.8	13.1	3.3	S
Life and related scientists	100.0	81.9	1.6	13.5	2.7	0.3
Agricultural scientists	100.0	84.1	2.0	9.4	4.1	S
Biological scientists	100.0	77.3	1.4	18.2	2.8	0.4
Forestry and conservation scientists	100.0	88.9	S	6.4	S	S
Postsecondary teachers, life and related sciences	100.0	88.6	1.9	7.1	2.2	0.2
Physical and related scientists	100.0	83.1	1.4	13.2	2.0	0.3
Chemists, except biochemistry	100.0	76.5	1.4	20.2	1.8	S
Earth scientists	100.0	87.2	S	10.3	1.7	S
Physics and astronomers	100.0	84.6	0.9	13.0	1.3	S
Other physical scientists	100.0	88.1	S	8.9	S	S
Postsecondary teachers, physical and related sciences	100.0	87.1	1.8	7.6	2.8	0.6
Social scientists	100.0	84.4	4.0	8.0	3.0	0.6
Economists	100.0	80.8	1.9	14.3	2.5	S
Political scientists	100.0	89.8	S	5.1	S	S
Sociologists and anthropologists	100.0	90.4	3.3	3.8	2.2	S
S&T historians and other social scientists	100.0	84.3	4.0	8.6	S	S
Postsecondary teachers, social sciences	100.0	84.3	4.6	7.2	3.3	0.6
Psychologists	100.0	91.6	2.8	2.0	3.0	0.5
Psychologists	100.0	92.3	2.4	2.0	2.8	0.5
Postsecondary teachers, psychology	100.0	89.8	4.1	2.2	3.5	0.3
Engineers	100.0	69.7	1.5	26.5	2.0	0.2
Aerospace/aeronautical engineers	100.0	76.6	1.1	20.9	1.3	S
Chemical engineers	100.0	66.1	1.3	31.0	1.5	S
Civil and architectural engineers	100.0	61.9	S	31.2	5.6	S
Electrical and related engineers	100.0	62.4	1.5	34.5	1.4	0.3
Materials/metallurgical engineers	100.0	78.2	S	17.5	S	S
Mechanical engineers	100.0	61.4	0.6	36.4	1.5	S
Other engineers	100.0	73.1	1.2	23.6	1.9	S
Postsecondary teachers, engineering	100.0	78.3	2.7	16.3	2.6	S
Non-S&E occupations	100.0	83.1	3.1	11.4	2.1	0.3
Top/mid-level managers, administrators, etc	100.0	84.2	3.1	10.3	2.1	0.4
Health and related occupations	100.0	79.0	3.6	15.1	2.0	0.4
Teachers, except S&E postsecondary teachers	100.0	85.7	4.8	6.6	2.4	0.4
Social services and related occupations	100.0	81.1	7.8	8.3	2.9	S
Technicians/technologists	100.0	67.6	0.7	30.0	1.4	S
Sales and marketing occupations	100.0	78.0	1.6	17.8	2.5	S
Other non-S&E occupations	100.0	89.2	1.5	7.6	1.6	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES: If the respondent was unemployed during the survey reference period, occupation of last job was reported. Numbers are rounded to nearest ten. The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Details may not add to total because of rounding. Excludes estimated 540 individuals who reported never having worked.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 29. Employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1999

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Occupation	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Number]								
All occupations	553,360	419,870	133,490	443,120	335,360	107,760	13,300	8,530	4,770
Scientists	342,140	251,360	90,780	280,320	207,220	73,100	7,460	4,830	2,630
Computer and information scientists	32,740	28,520	4,220	21,660	19,100	2,560	380	340	S
Computer/information scientists	26,550	23,370	3,180	16,830	15,080	1,740	220	200	S
Postsecondary teachers, computer sciences	6,190	5,150	1,040	4,840	4,020	820	160	140	S
Mathematical scientists	19,650	16,070	3,580	15,440	12,990	2,460	400	320	80
Mathematical scientists	6,410	4,940	1,470	4,780	3,830	960	150	140	S
Postsecondary teachers, math sciences	13,230	11,130	2,110	10,660	9,160	1,500	250	180	70
Life and related scientists	104,030	74,790	29,250	84,250	61,880	22,370	1,830	1,240	590
Agricultural scientists	8,560	7,180	1,380	7,070	6,030	1,040	200	160	S
Biological scientists	58,160	39,500	18,660	44,340	31,040	13,300	850	560	280
Forestry and conservation scientists	1,190	950	240	1,050	820	230	S	S	S
Postsecondary teachers, life and related sciences	36,130	27,160	8,970	31,790	23,980	7,810	770	510	260
Physical and related scientists	75,350	65,640	9,710	61,590	54,310	7,280	1,150	1,010	140
Chemists, except biochemistry	24,840	20,910	3,940	18,470	15,920	2,550	420	350	70
Earth scientists	9,630	8,560	1,060	8,330	7,440	890	S	S	S
Physics and astronomers	13,460	12,540	920	11,230	10,630	610	140	130	S
Other physical scientists	1,330	1,150	190	1,180	1,030	150	S	S	S
Postsecondary teachers, physical and related sciences	26,070	22,470	3,600	22,370	19,300	3,080	540	480	60
Social scientists	45,460	32,370	13,090	38,110	27,210	10,900	1,800	1,230	570
Economists	6,970	5,340	1,630	5,600	4,280	1,310	130	110	S
Political scientists	1,060	790	280	940	700	240	S	S	S
Sociologists and anthropologists	3,560	1,720	1,840	3,230	1,580	1,650	90	S	60
S&T historians and other social scientists	2,200	1,250	950	1,830	1,040	790	80	S	S
Postsecondary teachers, social sciences	31,670	23,270	8,400	26,520	19,600	6,910	1,480	1,040	440
Psychologists	64,910	33,980	30,930	59,270	31,740	27,530	1,900	700	1,200
Psychologists	48,580	24,350	24,230	44,660	22,910	21,750	1,220	410	800
Postsecondary teachers, psychology	16,320	9,620	6,700	14,610	8,820	5,780	690	290	400
Engineers	74,600	69,310	5,290	50,680	47,050	3,630	1,190	1,080	110
Aerospace/aeronautical engineers	4,070	3,870	200	3,050	2,910	140	50	S	S
Chemical engineers	7,610	6,890	710	4,880	4,410	460	120	110	S
Civil and architectural engineers	4,150	3,980	170	2,550	2,400	150	S	S	S
Electrical and related engineers	15,350	14,430	920	9,300	8,850	450	210	190	S
Materials/metallurgical engineers	1,050	880	170	820	720	100	S	S	S
Mechanical engineers	8,610	8,310	300	5,020	4,870	150	60	60	S
Other engineers	16,690	15,170	1,520	11,920	10,810	1,120	200	180	S
Postsecondary teachers, engineering	17,080	15,760	1,310	13,150	12,090	1,060	490	450	S
Non-S&E occupations	136,630	99,200	37,430	112,120	81,090	31,030	4,640	2,610	2,040
Top/mid-level managers, administrators, etc	66,070	53,500	12,560	54,880	44,410	10,470	2,210	1,390	820
Health and related occupations	17,270	11,520	5,750	13,550	9,070	4,490	660	380	280
Teachers, except S&E postsecondary teachers	23,700	12,410	11,300	20,070	10,450	9,620	1,200	550	650
Social services and related occupations	2,350	1,460	890	1,910	1,150	760	180	120	70
Technicians/technologists	7,530	6,490	1,040	4,980	4,340	640	S	S	S
Sales and marketing occupations	6,190	4,730	1,460	4,730	3,590	1,140	110	80	S
Other non-S&E occupations	13,520	9,080	4,430	12,000	8,080	3,920	230	70	150

See explanatory information and SOURCE at end of table.

Table 29. Employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1999

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Occupation	Asian or Pacific Islander			Hispanic			American Indian/ Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Number]								
All occupations	81,100	64,860	16,240	14,020	9,800	4,220	1,820	1,320	500
Scientists	43,730	32,130	11,600	9,340	6,260	3,080	1,280	910	370
Computer and information scientists	9,930	8,420	1,510	750	640	110	S	S	S
Computer/information scientists	8,840	7,520	1,320	650	550	100	S	S	S
Postsecondary teachers, computer sciences	1,090	900	180	100	90	S	S	S	S
Mathematical scientists	3,220	2,290	930	570	460	110	S	S	S
Mathematical scientists	1,360	880	470	120	90	S	S	S	S
Postsecondary teachers, math sciences	1,860	1,400	460	450	380	80	S	S	S
Life and related scientists	14,760	9,580	5,180	2,830	1,900	930	360	180	180
Agricultural scientists	860	660	200	380	280	100	S	S	S
Biological scientists	11,110	6,770	4,350	1,630	1,030	600	230	100	130
Forestry and conservation scientists	90	90	S	S	S	S	S	S	S
Postsecondary teachers, life and related sciences	2,690	2,060	630	790	570	220	80	S	50
Physical and related scientists	10,660	8,690	1,970	1,690	1,390	300	270	250	S
Chemists, except biochemistry	5,440	4,220	1,220	500	400	100	S	S	S
Earth scientists	1,060	910	150	180	160	S	S	S	S
Physics and astronomers	1,870	1,610	260	200	160	S	S	S	S
Other physical scientists	110	80	S	S	S	S	S	S	S
Postsecondary teachers, physical and related sciences	2,190	1,870	320	800	660	140	180	170	S
Social scientists	3,810	2,740	1,070	1,460	940	520	280	250	S
Economists	1,020	760	260	200	150	S	S	S	S
Political scientists	70	S	S	S	S	S	S	S	S
Sociologists and anthropologists	150	70	80	80	S	50	S	S	S
S&T historians and other social scientists	220	130	80	S	S	S	S	S	S
Postsecondary teachers, social sciences	2,360	1,740	620	1,100	710	390	210	190	S
Psychologists	1,360	410	940	2,040	930	1,110	330	210	130
Psychologists	980	220	760	1,450	650	790	280	160	120
Postsecondary teachers, psychology	380	190	180	590	270	320	60	S	S
Engineers	20,990	19,590	1,390	1,620	1,470	140	120	110	S
Aerospace/aeronautical engineers	910	850	60	50	50	S	S	S	S
Chemical engineers	2,490	2,250	240	120	120	S	S	S	S
Civil and architectural engineers	1,300	1,290	S	240	240	S	S	S	S
Electrical and related engineers	5,590	5,150	440	220	220	S	S	S	S
Materials/metallurgical engineers	180	140	S	S	S	S	S	S	S
Mechanical engineers	3,400	3,260	140	120	110	S	S	S	S
Other engineers	4,170	3,850	310	350	300	50	S	S	S
Postsecondary teachers, engineering	2,960	2,810	150	460	410	60	S	S	S
Non-S&E occupations	16,390	13,140	3,250	3,060	2,060	1,000	420	300	120
Top/mid-level managers, administrators, etc	7,280	6,370	910	1,490	1,170	320	210	180	S
Health and related occupations	2,640	1,820	820	360	210	150	60	S	S
Teachers, except S&E postsecondary teachers	1,690	1,060	630	630	290	340	100	50	S
Social services and related occupations	180	150	S	80	S	S	S	S	S
Technicians/technologists	2,350	2,000	350	120	100	S	S	S	S
Sales and marketing occupations	1,170	970	200	180	90	80	S	S	S
Other non-S&E occupations	1,070	770	300	200	160	S	S	S	S

See explanatory information and SOURCE at end of table.

Table 29. Employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1999

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Occupation	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Percent]								
All occupations	100.0	75.9	24.1	100.0	75.7	24.3	100.0	64.1	35.9
Scientists	100.0	73.5	26.5	100.0	73.9	26.1	100.0	64.8	35.2
Computer and information scientists	100.0	87.1	12.9	100.0	88.2	11.8	100.0	88.9	S
Computer/information scientists	100.0	88.0	12.0	100.0	89.7	10.3	100.0	90.7	S
Postsecondary teachers, computer sciences	100.0	83.3	16.7	100.0	83.1	16.9	100.0	86.5	S
Mathematical scientists	100.0	81.8	18.2	100.0	84.1	15.9	100.0	80.3	19.7
Mathematical scientists	100.0	77.0	23.0	100.0	80.0	20.0	100.0	92.5	S
Postsecondary teachers, math sciences	100.0	84.1	15.9	100.0	85.9	14.1	100.0	73.1	26.9
Life and related scientists	100.0	71.9	28.1	100.0	73.4	26.6	100.0	67.7	32.3
Agricultural scientists	100.0	83.9	16.1	100.0	85.3	14.7	100.0	80.2	S
Biological scientists	100.0	67.9	32.1	100.0	70.0	30.0	100.0	66.4	33.6
Forestry and conservation scientists	100.0	79.7	20.3	100.0	77.8	22.2	100.0	S	S
Postsecondary teachers, life and related sciences	100.0	75.2	24.8	100.0	75.4	24.6	100.0	66.0	34.0
Physical and related scientists	100.0	87.1	12.9	100.0	88.2	11.8	100.0	87.6	12.4
Chemists, except biochemistry	100.0	84.2	15.8	100.0	86.2	13.8	100.0	83.4	16.6
Earth scientists	100.0	88.9	11.1	100.0	89.3	10.7	100.0	S	S
Physics and astronomers	100.0	93.2	6.8	100.0	94.6	5.4	100.0	96.3	S
Other physical scientists	100.0	86.1	13.9	100.0	87.0	13.0	100.0	S	S
Postsecondary teachers, physical and related sciences	100.0	86.2	13.8	100.0	86.2	13.8	100.0	89.2	10.8
Social scientists	100.0	71.2	28.8	100.0	71.4	28.6	100.0	68.3	31.7
Economists	100.0	76.6	23.4	100.0	76.5	23.5	100.0	83.9	S
Political scientists	100.0	73.9	26.1	100.0	74.9	25.1	100.0	S	S
Sociologists and anthropologists	100.0	48.3	51.7	100.0	48.9	51.1	100.0	S	61.3
S&T historians and other social scientists	100.0	57.0	43.0	100.0	57.0	43.0	100.0	S	S
Postsecondary teachers, social sciences	100.0	73.5	26.5	100.0	73.9	26.1	100.0	70.1	29.9
Psychologists	100.0	52.4	47.6	100.0	53.5	46.5	100.0	36.7	63.3
Psychologists	100.0	50.1	49.9	100.0	51.3	48.7	100.0	33.9	66.1
Postsecondary teachers, psychology	100.0	59.0	41.0	100.0	60.4	39.6	100.0	41.7	58.3
Engineers	100.0	92.9	7.1	100.0	92.8	7.2	100.0	91.1	8.9
Aerospace/aeronautical engineers	100.0	95.0	5.0	100.0	95.5	4.5	100.0	S	S
Chemical engineers	100.0	90.6	9.4	100.0	90.5	9.5	100.0	95.6	S
Civil and architectural engineers	100.0	96.0	4.0	100.0	94.1	5.9	100.0	S	S
Electrical and related engineers	100.0	94.0	6.0	100.0	95.1	4.9	100.0	91.5	S
Materials/metallurgical engineers	100.0	83.9	16.1	100.0	88.2	11.8	100.0	S	S
Mechanical engineers	100.0	96.6	3.4	100.0	97.0	3.0	100.0	100.0	S
Other engineers	100.0	90.9	9.1	100.0	90.6	9.4	100.0	87.6	S
Postsecondary teachers, engineering	100.0	92.3	7.7	100.0	91.9	8.1	100.0	91.5	S
Non-S&E occupations	100.0	72.6	27.4	100.0	72.3	27.7	100.0	56.1	43.9
Top/mid-level managers, administrators, etc.	100.0	81.0	19.0	100.0	80.9	19.1	100.0	62.7	37.3
Health and related occupations	100.0	66.7	33.3	100.0	66.9	33.1	100.0	58.0	42.0
Teachers, except S&E postsecondary teachers	100.0	52.3	47.7	100.0	52.1	47.9	100.0	45.8	54.2
Social services and related occupations	100.0	62.0	38.0	100.0	60.2	39.8	100.0	64.0	36.0
Technicians/technologists	100.0	86.2	13.8	100.0	87.2	12.8	100.0	S	S
Sales and marketing occupations	100.0	76.5	23.5	100.0	76.0	24.0	100.0	67.7	S
Other non-S&E occupations	100.0	67.2	32.8	100.0	67.3	32.7	100.0	31.8	68.2

See explanatory information and SOURCE at end of table.

Table 29. Employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1999

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Occupation	Asian or Pacific Islander			Hispanic			American Indian/ Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Percent]								
All occupations	100.0	80.0	20.0	100.0	69.9	30.1	100.0	72.7	27.3
Scientists	100.0	73.5	26.5	100.0	67.1	32.9	100.0	71.3	28.7
Computer and information scientists	100.0	84.8	15.2	100.0	85.3	14.7	100.0	S	S
Computer/information scientists	100.0	85.0	15.0	100.0	84.8	15.2	100.0	S	S
Postsecondary teachers, computer sciences	100.0	83.1	16.9	100.0	88.9	S	100.0	S	S
Mathematical scientists	100.0	71.1	28.9	100.0	80.8	19.2	100.0	S	S
Mathematical scientists	100.0	65.3	34.7	100.0	71.5	S	100.0	S	S
Postsecondary teachers, math sciences	100.0	75.4	24.6	100.0	83.3	16.7	100.0	S	S
Life and related scientists	100.0	64.9	35.1	100.0	67.3	32.7	100.0	50.2	49.8
Agricultural scientists	100.0	76.9	23.1	100.0	72.9	27.1	100.0	S	S
Biological scientists	100.0	60.9	39.1	100.0	62.9	37.1	100.0	45.3	54.7
Forestry and conservation scientists	100.0	97.0	S	100.0	S	S	100.0	S	S
Postsecondary teachers, life and related sciences	100.0	76.6	23.4	100.0	72.4	27.6	100.0	S	63.3
Physical and related scientists	100.0	81.5	18.5	100.0	82.4	17.6	100.0	91.6	S
Chemists, except biochemistry	100.0	77.6	22.4	100.0	79.7	20.3	100.0	S	S
Earth scientists	100.0	86.2	13.8	100.0	89.5	S	100.0	S	S
Physics and astronomers	100.0	86.2	13.8	100.0	79.2	S	100.0	S	S
Other physical scientists	100.0	75.3	S	100.0	S	S	100.0	S	S
Postsecondary teachers, physical and related sciences	100.0	85.3	14.7	100.0	83.0	17.0	100.0	95.3	S
Social scientists	100.0	71.9	28.1	100.0	64.4	35.6	100.0	88.7	S
Economists	100.0	74.7	25.3	100.0	79.3	S	100.0	S	S
Political scientists	100.0	S	S	100.0	S	S	100.0	S	S
Sociologists and anthropologists	100.0	49.4	50.6	100.0	S	65.4	100.0	S	S
S&T historians and other social scientists	100.0	61.3	38.7	100.0	S	S	100.0	S	S
Postsecondary teachers, social sciences	100.0	73.7	26.3	100.0	64.5	35.5	100.0	87.0	S
Psychologists	100.0	30.4	69.6	100.0	45.4	54.6	100.0	61.5	38.5
Psychologists	100.0	22.3	77.7	100.0	45.1	54.9	100.0	57.2	42.8
Postsecondary teachers, psychology	100.0	51.4	48.6	100.0	46.0	54.0	100.0	S	S
Engineers	100.0	93.4	6.6	100.0	91.2	8.8	100.0	88.6	S
Aerospace/aeronautical engineers	100.0	92.9	7.1	100.0	100.0	S	100.0	S	S
Chemical engineers	100.0	90.3	9.7	100.0	100.0	S	100.0	S	S
Civil and architectural engineers	100.0	99.5	S	100.0	100.0	S	100.0	S	S
Electrical and related engineers	100.0	92.2	7.8	100.0	96.6	S	100.0	S	S
Materials/metallurgical engineers	100.0	75.1	S	100.0	S	S	100.0	S	S
Mechanical engineers	100.0	95.9	4.1	100.0	95.0	S	100.0	S	S
Other engineers	100.0	92.5	7.5	100.0	84.7	15.3	100.0	S	S
Postsecondary teachers, engineering	100.0	95.0	5.0	100.0	88.1	11.9	100.0	S	S
Non-S&E occupations	100.0	80.2	19.8	100.0	67.4	32.6	100.0	72.2	27.8
Top/mid-level managers, administrators, etc.	100.0	87.5	12.5	100.0	78.3	21.7	100.0	84.1	S
Health and related occupations	100.0	69.0	31.0	100.0	58.0	42.0	100.0	S	S
Teachers, except S&E postsecondary teachers	100.0	62.7	37.3	100.0	46.0	54.0	100.0	50.4	S
Social services and related occupations	100.0	82.5	S	100.0	S	S	100.0	S	S
Technicians/technologists	100.0	85.1	14.9	100.0	83.2	S	100.0	S	S
Sales and marketing occupations	100.0	82.6	17.4	100.0	54.0	46.0	100.0	S	S
Other non-S&E occupations	100.0	72.2	27.8	100.0	78.0	S	100.0	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Numbers are rounded to nearest ten.
Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 30. Employed doctoral scientists and engineers, by occupation and citizenship status: 1999

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Occupation	Total	U.S. citizen			Non-U.S. citizen		
		Total	Native born	Naturalized	Total	Permanent resident	Temporary resident
	[Number]						
All occupations	553,360	491,600	429,070	62,530	61,760	47,260	14,510
Scientists	342,140	304,210	273,430	30,780	37,930	28,640	9,290
Computer and information scientists	32,740	24,410	19,560	4,840	8,340	6,260	2,080
Computer/information scientists	26,550	19,190	15,360	3,830	7,360	5,420	1,940
Postsecondary teachers, computer sciences	6,190	5,220	4,200	1,010	970	840	140
Mathematical scientists	19,650	16,560	14,140	2,420	3,080	2,270	820
Mathematical scientists	6,410	5,230	4,340	890	1,190	890	300
Postsecondary teachers, math sciences	13,230	11,340	9,800	1,530	1,900	1,380	520
Life and related scientists	104,030	92,130	83,180	8,950	11,900	8,630	3,270
Agricultural scientists	8,560	7,900	7,160	740	650	360	290
Biological scientists	58,160	48,480	42,930	5,560	9,680	6,810	2,870
Forestry and conservation scientists	1,190	1,160	1,130	S	S	S	S
Postsecondary teachers, life and related sciences	36,130	34,590	31,970	2,620	1,540	1,430	110
Physical and related scientists	75,350	67,010	59,060	7,940	8,340	6,390	1,950
Chemists, except biochemistry	24,840	21,090	18,070	3,020	3,760	2,830	930
Earth scientists	9,630	8,600	7,950	650	1,020	700	320
Physics and astronomers	13,460	11,690	10,210	1,490	1,770	1,330	440
Other physical scientists	1,330	1,270	1,150	110	70	S	S
Postsecondary teachers, physical and related sciences	26,070	24,360	21,680	2,680	1,720	1,480	240
Social scientists	45,460	40,730	36,950	3,780	4,730	3,810	920
Economists	6,970	6,000	5,340	660	970	710	270
Political scientists	1,060	1,040	930	110	S	S	S
Sociologists and anthropologists	3,560	3,380	3,240	130	180	140	S
S&T historians and other social scientists	2,200	2,030	1,880	150	170	110	60
Postsecondary teachers, social sciences	31,670	28,290	25,560	2,730	3,380	2,840	540
Psychologists	64,910	63,370	60,530	2,840	1,540	1,290	250
Psychologists	48,580	47,570	45,240	2,330	1,010	880	130
Postsecondary teachers, psychology	16,320	15,800	15,290	510	530	410	120
Engineers	74,600	60,210	44,590	15,620	14,390	10,670	3,720
Aerospace/aeronautical engineers	4,070	3,790	2,960	830	280	230	50
Chemical engineers	7,610	6,190	4,460	1,730	1,420	990	430
Civil and architectural engineers	4,150	3,160	1,930	1,230	980	690	290
Electrical and related engineers	15,350	11,310	8,160	3,150	4,040	2,700	1,340
Materials/metallurgical engineers	1,050	930	810	110	120	120	S
Mechanical engineers	8,610	6,220	4,120	2,110	2,380	1,750	630
Other engineers	16,690	13,760	10,820	2,940	2,930	2,190	740
Postsecondary teachers, engineering	17,080	14,850	11,340	3,510	2,230	2,000	240
Non-S&E occupations	136,630	127,180	111,050	16,130	9,450	7,950	1,500
Top/mid-level managers, administrators, etc.	66,070	62,630	54,620	8,000	3,440	3,070	380
Health and related occupations	17,270	15,940	13,670	2,270	1,340	1,030	310
Teachers, except S&E postsecondary teachers	23,700	22,220	19,840	2,380	1,480	1,150	330
Social services and related occupations	2,350	2,250	1,980	270	100	70	S
Technicians/technologists	7,530	5,710	4,620	1,090	1,820	1,400	420
Sales and marketing occupations	6,190	5,550	4,410	1,150	640	630	S
Other non-S&E occupations	13,520	12,880	11,910	970	640	590	S

See explanatory information and SOURCE at end of table.

Table 30. Employed doctoral scientists and engineers, by occupation and citizenship status: 1999

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Occupation	Total	U.S. citizen			Non-U.S. citizen		
		Total	Native born	Naturalized	Total	Permanent resident	Temporary resident
	[Percent]						
All occupations	100.0	88.8	77.5	11.3	11.2	8.5	2.6
Scientists	100.0	88.9	79.9	9.0	11.1	8.4	2.7
Computer and information scientists	100.0	74.5	59.7	14.8	25.5	19.1	6.4
Computer/information scientists	100.0	72.3	57.8	14.4	27.7	20.4	7.3
Postsecondary teachers, computer sciences	100.0	84.3	67.9	16.4	15.7	13.5	2.2
Mathematical scientists	100.0	84.3	72.0	12.3	15.7	11.5	4.2
Mathematical scientists	100.0	81.5	67.6	13.9	18.5	13.9	4.6
Postsecondary teachers, math sciences	100.0	85.7	74.1	11.6	14.3	10.4	3.9
Life and related scientists	100.0	88.6	80.0	8.6	11.4	8.3	3.1
Agricultural scientists	100.0	92.4	83.7	8.7	7.6	4.2	3.4
Biological scientists	100.0	83.4	73.8	9.6	16.6	11.7	4.9
Forestry and conservation scientists	100.0	97.2	94.9	S	S	S	S
Postsecondary teachers, life and related sciences	100.0	95.7	88.5	7.3	4.3	3.9	0.3
Physical and related scientists	100.0	88.9	78.4	10.5	11.1	8.5	2.6
Chemists, except biochemistry	100.0	84.9	72.7	12.2	15.1	11.4	3.7
Earth scientists	100.0	89.4	82.6	6.8	10.6	7.3	3.3
Physics and astronomers	100.0	86.8	75.8	11.0	13.2	9.9	3.3
Other physical scientists	100.0	95.0	86.5	8.5	5.0	S	S
Postsecondary teachers, physical and related sciences	100.0	93.4	83.2	10.3	6.6	5.7	0.9
Social scientists	100.0	89.6	81.3	8.3	10.4	8.4	2.0
Economists	100.0	86.0	76.6	9.5	14.0	10.1	3.9
Political scientists	100.0	97.7	87.3	10.4	S	S	S
Sociologists and anthropologists	100.0	94.9	91.2	3.7	5.1	3.8	S
S&T historians and other social scientists	100.0	92.4	85.6	6.8	7.6	4.8	2.8
Postsecondary teachers, social sciences	100.0	89.3	80.7	8.6	10.7	9.0	1.7
Psychologists	100.0	97.6	93.3	4.4	2.4	2.0	0.4
Psychologists	100.0	97.9	93.1	4.8	2.1	1.8	0.3
Postsecondary teachers, psychology	100.0	96.8	93.7	3.1	3.2	2.5	0.7
Engineers	100.0	80.7	59.8	20.9	19.3	14.3	5.0
Aerospace/aeronautical engineers	100.0	93.1	72.7	20.4	6.9	5.7	1.2
Chemical engineers	100.0	81.4	58.6	22.8	18.6	13.0	5.7
Civil and architectural engineers	100.0	76.3	46.6	29.8	23.7	16.7	7.0
Electrical and related engineers	100.0	73.7	53.2	20.5	26.3	17.6	8.7
Materials/metallurgical engineers	100.0	88.4	77.6	10.8	11.6	11.6	S
Mechanical engineers	100.0	72.3	47.8	24.5	27.7	20.4	7.3
Other engineers	100.0	82.4	64.8	17.6	17.6	13.1	4.5
Postsecondary teachers, engineering	100.0	86.9	66.4	20.6	13.1	11.7	1.4
Non-S&E occupations	100.0	93.1	81.3	11.8	6.9	5.8	1.1
Top/mid-level managers, administrators, etc.	100.0	94.8	82.7	12.1	5.2	4.6	0.6
Health and related occupations	100.0	92.3	79.1	13.1	7.7	6.0	1.8
Teachers, except S&E postsecondary teachers	100.0	93.7	83.7	10.1	6.3	4.9	1.4
Social services and related occupations	100.0	95.8	84.3	11.6	4.2	3.1	S
Technicians/technologists	100.0	75.9	61.3	14.5	24.1	18.6	5.5
Sales and marketing occupations	100.0	89.7	71.2	18.5	10.3	10.2	S
Other non-S&E occupations	100.0	95.3	88.1	7.2	4.7	4.4	S

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 31. Employed doctoral scientists and engineers, by occupation and age: 1999

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Occupation	Total	Under 35	35-39	40-44	45-49	50-54	55-59	60-64	65-75
	[Number]								
All occupations	553,360	53,750	79,550	87,400	89,870	90,370	81,360	42,920	28,140
Scientists	342,140	35,450	52,710	57,590	56,830	53,370	44,960	24,170	17,050
Computer and information scientists	32,740	4,360	6,520	5,890	4,740	5,160	4,240	1,410	420
Computer/information scientists	26,550	3,930	5,760	4,780	3,610	4,110	3,020	1,040	300
Postsecondary teachers, computer sciences	6,190	440	760	1,110	1,130	1,050	1,220	370	120
Mathematical scientists	19,650	2,140	2,910	3,170	2,890	2,940	3,150	1,650	810
Mathematical scientists	6,410	830	990	1,240	1,110	970	920	310	S
Postsecondary teachers, math sciences	13,230	1,310	1,920	1,930	1,780	1,960	2,220	1,350	760
Life and related scientists	104,030	12,060	18,060	19,010	17,890	14,340	12,250	5,790	4,640
Agricultural scientists	8,560	630	1,390	1,640	1,690	1,130	1,050	630	410
Biological scientists	58,160	10,130	12,460	10,440	9,290	6,940	4,860	2,280	1,770
Forestry and conservation scientists	1,190	80	140	220	250	190	160	100	50
Postsecondary teachers, life and related sciences	36,130	1,220	4,070	6,720	6,660	6,080	6,180	2,790	2,410
Physical and related scientists	75,350	8,410	12,730	12,500	10,860	9,970	9,690	7,040	4,140
Chemists, except biochemistry	24,840	3,600	5,060	4,510	3,750	2,960	2,460	1,570	930
Earth scientists	9,630	770	1,410	1,490	1,730	1,960	960	850	460
Physics and astronomers	13,460	2,160	2,290	2,100	1,830	1,460	1,710	1,170	740
Other physical scientists	1,330	110	130	150	250	180	190	130	190
Postsecondary teachers, physical and related sciences	26,070	1,780	3,840	4,240	3,300	3,410	4,370	3,320	1,820
Social scientists	45,460	3,720	5,090	6,580	7,650	8,390	7,110	4,090	2,820
Economists	6,970	930	880	1,290	830	1,510	770	480	280
Political scientists	1,060	150	160	80	60	160	180	230	50
Sociologists and anthropologists	3,560	260	370	520	930	800	440	120	110
S&T historians and other social scientists	2,200	160	220	300	420	590	240	150	120
Postsecondary teachers, social sciences	31,670	2,230	3,470	4,390	5,400	5,330	5,490	3,110	2,260
Psychologists	64,910	4,750	7,410	10,450	12,800	12,570	8,520	4,190	4,220
Psychologists	48,580	3,320	5,450	7,940	9,980	9,870	6,130	2,880	3,000
Postsecondary teachers, psychology	16,320	1,440	1,960	2,500	2,830	2,700	2,390	1,300	1,210
Engineers	74,600	10,890	13,890	12,820	9,080	8,860	9,580	6,200	3,280
Aerospace/aeronautical engineers	4,070	470	580	650	590	730	420	480	150
Chemical engineers	7,610	1,580	1,540	1,570	710	720	940	300	250
Civil and architectural engineers	4,150	350	820	580	650	490	660	330	260
Electrical and related engineers	15,350	2,970	3,630	2,090	1,610	1,290	2,180	1,120	450
Materials/metallurgical engineers	1,050	120	180	240	140	170	60	100	S
Mechanical engineers	8,610	1,450	1,560	1,630	940	1,150	1,010	670	190
Other engineers	16,690	2,520	3,160	2,940	2,160	2,110	1,990	1,160	640
Postsecondary teachers, engineering	17,080	1,430	2,420	3,110	2,280	2,210	2,310	2,020	1,300
Non-S&E occupations	136,630	7,410	12,950	16,990	23,960	28,130	26,820	12,550	7,810
Top/mid-level managers, administrators, etc	66,070	2,130	4,920	7,570	11,700	15,020	14,990	6,690	3,050
Health and related occupations	17,270	1,780	2,080	2,540	3,160	2,930	2,640	1,150	990
Teachers, except S&E postsecondary teachers	23,700	1,130	2,280	3,170	4,520	4,600	4,570	2,150	1,280
Social services and related occupations	2,350	130	70	200	450	630	310	300	260
Technicians/technologists	7,530	1,000	1,600	1,160	910	1,300	890	430	240
Sales and marketing occupations	6,190	250	630	720	1,070	1,440	1,030	550	510
Other non-S&E occupations	13,520	980	1,380	1,630	2,160	2,220	2,380	1,280	1,480

See explanatory information and SOURCE at end of table.

Table 31. Employed doctoral scientists and engineers, by occupation and age: 1999

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Occupation	Total	Under 35	35-39	40-44	45-49	50-54	55-59	60-64	65-75
	[Percent]								
All occupations	100.0	9.7	14.4	15.8	16.2	16.3	14.7	7.8	5.1
Scientists	100.0	10.4	15.4	16.8	16.6	15.6	13.1	7.1	5.0
Computer and information scientists	100.0	13.3	19.9	18.0	14.5	15.8	12.9	4.3	1.3
Computer/information scientists	100.0	14.8	21.7	18.0	13.6	15.5	11.4	3.9	1.1
Postsecondary teachers, computer sciences	100.0	7.1	12.2	17.9	18.3	16.9	19.7	5.9	2.0
Mathematical scientists	100.0	10.9	14.8	16.1	14.7	14.9	16.0	8.4	4.1
Mathematical scientists	100.0	13.0	15.4	19.3	17.2	15.2	14.4	4.8	S
Postsecondary teachers, math sciences	100.0	9.9	14.5	14.6	13.5	14.8	16.8	10.2	5.8
Life and related scientists	100.0	11.6	17.4	18.3	17.2	13.8	11.8	5.6	4.5
Agricultural scientists	100.0	7.4	16.2	19.1	19.7	13.1	12.3	7.4	4.8
Biological scientists	100.0	17.4	21.4	18.0	16.0	11.9	8.4	3.9	3.0
Forestry and conservation scientists	100.0	7.1	12.0	18.1	21.0	16.0	13.1	8.0	4.6
Postsecondary teachers, life and related sciences	100.0	3.4	11.3	18.6	18.4	16.8	17.1	7.7	6.7
Physical and related scientists	100.0	11.2	16.9	16.6	14.4	13.2	12.9	9.3	5.5
Chemists, except biochemistry	100.0	14.5	20.4	18.2	15.1	11.9	9.9	6.3	3.7
Earth scientists	100.0	8.0	14.6	15.5	17.9	20.4	10.0	8.8	4.8
Physics and astronomers	100.0	16.1	17.0	15.6	13.6	10.9	12.7	8.7	5.5
Other physical scientists	100.0	7.9	10.1	11.5	19.0	13.3	14.4	9.9	14.1
Postsecondary teachers, physical and related sciences	100.0	6.8	14.7	16.3	12.7	13.1	16.8	12.7	7.0
Social scientists	100.0	8.2	11.2	14.5	16.8	18.5	15.6	9.0	6.2
Economists	100.0	13.4	12.6	18.5	12.0	21.7	11.0	6.9	4.0
Political scientists	100.0	13.9	14.6	7.2	6.0	14.9	16.9	21.6	4.9
Sociologists and anthropologists	100.0	7.3	10.4	14.6	26.2	22.6	12.4	3.4	3.1
S&T historians and other social scientists	100.0	7.2	10.0	13.7	19.1	27.0	10.9	6.7	5.4
Postsecondary teachers, social sciences	100.0	7.0	11.0	13.9	17.0	16.8	17.3	9.8	7.1
Psychologists	100.0	7.3	11.4	16.1	19.7	19.4	13.1	6.4	6.5
Psychologists	100.0	6.8	11.2	16.4	20.5	20.3	12.6	5.9	6.2
Postsecondary teachers, psychology	100.0	8.8	12.0	15.3	17.3	16.5	14.6	8.0	7.4
Engineers	100.0	14.6	18.6	17.2	12.2	11.9	12.8	8.3	4.4
Aerospace/aeronautical engineers	100.0	11.5	14.2	15.9	14.6	17.9	10.2	11.9	3.8
Chemical engineers	100.0	20.7	20.3	20.6	9.3	9.4	12.4	4.0	3.3
Civil and architectural engineers	100.0	8.4	19.9	13.9	15.6	11.8	16.0	8.1	6.3
Electrical and related engineers	100.0	19.4	23.6	13.6	10.5	8.4	14.2	7.3	2.9
Materials/metallurgical engineers	100.0	11.7	16.8	23.3	13.2	16.4	6.0	9.5	S
Mechanical engineers	100.0	16.8	18.1	19.0	10.9	13.4	11.8	7.8	2.3
Other engineers	100.0	15.1	18.9	17.6	13.0	12.6	11.9	7.0	3.9
Postsecondary teachers, engineering	100.0	8.4	14.2	18.2	13.4	12.9	13.5	11.8	7.6
Non-S&E occupations	100.0	5.4	9.5	12.4	17.5	20.6	19.6	9.2	5.7
Top/mid-level managers, administrators, etc	100.0	3.2	7.4	11.5	17.7	22.7	22.7	10.1	4.6
Health and related occupations	100.0	10.3	12.0	14.7	18.3	17.0	15.3	6.6	5.8
Teachers, except S&E postsecondary teachers	100.0	4.8	9.6	13.4	19.1	19.4	19.3	9.1	5.4
Social services and related occupations	100.0	5.4	2.9	8.5	19.0	26.9	13.3	12.9	11.1
Technicians/technologists	100.0	13.3	21.3	15.5	12.1	17.2	11.9	5.7	3.1
Sales and marketing occupations	100.0	4.0	10.1	11.6	17.3	23.2	16.6	8.9	8.3
Other non-S&E occupations	100.0	7.3	10.2	12.1	15.9	16.4	17.6	9.5	11.0

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 32. Employed doctoral scientists and engineers, by occupation and years since doctorate: 1999

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Occupation	Total	5 years or less	6-10 years	11-15 years	16-20 years	21-25 years	More than 25 years
				[Number]			
All occupations	553,360	115,990	95,700	80,240	74,190	71,710	115,530
Scientists	342,140	76,060	61,820	50,740	46,040	41,730	65,760
Computer and information scientists	32,740	9,850	6,620	3,990	3,960	3,450	4,880
Computer/information scientists	26,550	8,620	5,470	3,160	3,000	2,870	3,440
Postsecondary teachers, computer sciences	6,190	1,230	1,150	830	960	580	1,440
Mathematical scientists	19,650	3,760	3,690	2,940	2,080	2,490	4,680
Mathematical scientists	6,410	1,620	1,410	1,050	640	940	770
Postsecondary teachers, math sciences	13,230	2,150	2,280	1,890	1,450	1,550	3,910
Life and related scientists	104,030	25,290	19,680	15,070	13,540	11,980	18,480
Agricultural scientists	8,560	1,680	1,530	1,600	1,020	1,180	1,550
Biological scientists	58,160	19,490	11,880	7,840	6,480	5,430	7,030
Forestry and conservation scientists	1,190	320	200	170	190	70	240
Postsecondary teachers, life and related sciences	36,130	3,790	6,070	5,450	5,860	5,300	9,660
Physical and related scientists	75,350	14,710	12,760	11,390	9,450	8,510	18,530
Chemists, except biochemistry	24,840	5,950	4,660	3,920	3,180	2,780	4,360
Earth scientists	9,630	2,070	1,640	1,230	1,500	1,540	1,640
Physics and astronomers	13,460	3,310	2,110	1,930	1,670	1,290	3,160
Other physical scientists	1,330	200	150	250	160	120	470
Postsecondary teachers, physical and related sciences	26,070	3,190	4,210	4,060	2,940	2,780	8,890
Social scientists	45,460	9,840	6,950	6,460	6,640	6,910	8,670
Economists	6,970	1,590	1,090	1,120	1,070	1,090	1,000
Political scientists	1,060	280	160	S	170	150	290
Sociologists and anthropologists	3,560	940	630	580	710	390	300
S&T historians and other social scientists	2,200	660	320	200	260	420	340
Postsecondary teachers, social sciences	31,670	6,370	4,760	4,550	4,420	4,840	6,730
Psychologists	64,910	12,610	12,120	10,890	10,360	8,400	10,530
Psychologists	48,580	9,580	9,620	8,760	8,050	6,060	6,510
Postsecondary teachers, psychology	16,320	3,030	2,500	2,120	2,310	2,340	4,020
Engineers	74,600	19,980	14,240	9,960	7,250	7,850	15,310
Aerospace/aeronautical engineers	4,070	770	660	820	410	610	810
Chemical engineers	7,610	2,040	1,730	1,180	560	950	1,140
Civil and architectural engineers	4,150	1,140	780	610	460	370	800
Electrical and related engineers	15,350	5,620	2,840	1,440	1,190	1,180	3,090
Materials/metallurgical engineers	1,050	300	210	200	140	90	110
Mechanical engineers	8,610	3,080	1,440	910	790	840	1,550
Other engineers	16,690	4,550	3,520	1,880	1,990	1,760	3,000
Postsecondary teachers, engineering	17,080	2,480	3,080	2,930	1,720	2,070	4,810
Non-S&E occupations	136,630	19,950	19,640	19,550	20,900	22,120	34,460
Top/mid-level managers, administrators, etc	66,070	5,350	7,360	9,100	11,320	12,920	20,020
Health and related occupations	17,270	3,530	3,140	2,570	2,460	2,260	3,310
Teachers, except S&E postsecondary teachers	23,700	5,210	4,840	3,950	3,230	2,630	3,830
Social services and related occupations	2,350	540	500	360	200	330	410
Technicians/technologists	7,530	2,370	1,350	770	860	780	1,390
Sales and marketing occupations	6,190	730	760	840	1,050	1,270	1,550
Other non-S&E occupations	13,520	2,230	1,680	1,960	1,770	1,930	3,950

See explanatory information and SOURCE at end of table.

Table 32. Employed doctoral scientists and engineers, by occupation and years since doctorate: 1999

Page 2 of 2

Occupation	Total	5 years or less	6-10 years	11-15 years	16-20 years	21-25 years	More than 25 years
	[Percent]						
All occupations	100.0	21.0	17.3	14.5	13.4	13.0	20.9
Scientists	100.0	22.2	18.1	14.8	13.5	12.2	19.2
Computer and information scientists	100.0	30.1	20.2	12.2	12.1	10.5	14.9
Computer/information scientists	100.0	32.4	20.6	11.9	11.3	10.8	13.0
Postsecondary teachers, computer sciences	100.0	19.9	18.6	13.5	15.5	9.3	23.2
Mathematical scientists	100.0	19.1	18.8	15.0	10.6	12.7	23.8
Mathematical scientists	100.0	25.2	22.0	16.3	9.9	14.6	12.0
Postsecondary teachers, math sciences	100.0	16.2	17.2	14.3	10.9	11.7	29.6
Life and related scientists	100.0	24.3	18.9	14.5	13.0	11.5	17.8
Agricultural scientists	100.0	19.6	17.8	18.7	11.9	13.8	18.1
Biological scientists	100.0	33.5	20.4	13.5	11.1	9.3	12.1
Forestry and conservation scientists	100.0	27.2	16.7	14.6	15.7	5.6	20.2
Postsecondary teachers, life and related sciences	100.0	10.5	16.8	15.1	16.2	14.7	26.7
Physical and related scientists	100.0	19.5	16.9	15.1	12.5	11.3	24.6
Chemists, except biochemistry	100.0	23.9	18.7	15.8	12.8	11.2	17.6
Earth scientists	100.0	21.5	17.1	12.8	15.6	16.0	17.1
Physics and astronomers	100.0	24.6	15.6	14.3	12.4	9.6	23.5
Other physical scientists	100.0	14.9	10.9	18.9	11.6	8.7	35.0
Postsecondary teachers, physical and related sciences	100.0	12.2	16.1	15.6	11.3	10.7	34.1
Social scientists	100.0	21.7	15.3	14.2	14.6	15.2	19.1
Economists	100.0	22.9	15.6	16.0	15.4	15.7	14.4
Political scientists	100.0	26.4	14.8	S	15.9	14.4	27.0
Sociologists and anthropologists	100.0	26.6	17.8	16.2	19.9	11.1	8.5
S&T historians and other social scientists	100.0	29.9	14.4	9.1	11.9	19.2	15.4
Postsecondary teachers, social sciences	100.0	20.1	15.0	14.4	14.0	15.3	21.3
Psychologists	100.0	19.4	18.7	16.8	16.0	12.9	16.2
Psychologists	100.0	19.7	19.8	18.0	16.6	12.5	13.4
Postsecondary teachers, psychology	100.0	18.5	15.3	13.0	14.2	14.4	24.6
Engineers	100.0	26.8	19.1	13.4	9.7	10.5	20.5
Aerospace/aeronautical engineers	100.0	19.0	16.1	20.1	10.1	14.9	19.8
Chemical engineers	100.0	26.9	22.8	15.5	7.3	12.5	15.0
Civil and architectural engineers	100.0	27.5	18.8	14.6	11.0	8.9	19.2
Electrical and related engineers	100.0	36.6	18.5	9.4	7.7	7.7	20.2
Materials/metallurgical engineers	100.0	28.6	19.7	19.4	13.3	8.2	10.7
Mechanical engineers	100.0	35.8	16.7	10.6	9.2	9.7	18.0
Other engineers	100.0	27.3	21.1	11.2	11.9	10.5	18.0
Postsecondary teachers, engineering	100.0	14.5	18.0	17.1	10.1	12.1	28.1
Non-S&E occupations	100.0	14.6	14.4	14.3	15.3	16.2	25.2
Top/mid-level managers, administrators, etc	100.0	8.1	11.1	13.8	17.1	19.6	30.3
Health and related occupations	100.0	20.4	18.2	14.9	14.3	13.1	19.2
Teachers, except S&E postsecondary teachers	100.0	22.0	20.4	16.7	13.6	11.1	16.2
Social services and related occupations	100.0	22.8	21.5	15.4	8.7	14.2	17.4
Technicians/technologists	100.0	31.5	17.9	10.2	11.5	10.4	18.5
Sales and marketing occupations	100.0	11.8	12.3	13.5	16.9	20.5	25.0
Other non-S&E occupations	100.0	16.5	12.4	14.5	13.1	14.3	29.2

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES Numbers are rounded to nearest ten. Details may not add to total because of rounding

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 33. Employed doctoral scientists and engineers, by occupation and sector of employment: 1999

Page 1 of 2

Occupation	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
	[Number]								
All occupations	553,360	240,080	15,710	185,720	30,400	27,540	37,250	14,870	1,790
Scientists	342,140	176,060	9,600	86,520	19,780	15,710	24,530	8,740	1,190
Computer and information scientists	32,740	7,780	190	21,610	850	970	1,030	310	S
Computer/information scientists	26,550	1,880	S	21,500	850	970	1,030	310	S
Postsecondary teachers, computer sciences	6,190	5,900	180	110	S	S	S	S	S
Mathematical scientists	19,650	13,710	790	2,740	220	680	1,370	110	60
Mathematical scientists	6,410	1,180	80	2,740	220	680	1,370	110	60
Postsecondary teachers, math sciences	13,230	12,520	710	S	S	S	S	S	S
Life and related scientists	104,030	64,420	2,040	20,720	1,670	4,050	9,160	1,810	150
Agricultural scientists	8,560	2,650	S	3,790	350	120	1,520	90	S
Biological scientists	58,160	27,390	S	16,720	1,210	3,740	7,340	1,650	90
Forestry and conservation scientists	1,190	380	S	190	70	160	300	70	S
Postsecondary teachers, life and related sciences	36,130	34,000	2,020	S	S	S	S	S	S
Physical and related scientists	75,350	33,320	2,070	27,020	1,070	2,200	8,160	1,390	120
Chemists, except biochemistry	24,840	2,460	S	18,820	420	650	1,950	500	S
Earth scientists	9,630	2,820	S	2,810	310	520	2,540	590	S
Physics and astronomers	13,460	3,910	S	4,800	170	970	3,280	260	80
Other physical scientists	1,330	200	S	560	130	S	380	S	S
Postsecondary teachers, physical and related sciences	26,070	23,930	2,020	S	S	S	S	S	S
Social scientists	45,460	34,300	1,080	3,110	1,090	1,640	2,540	870	830
Economists	6,970	1,170	S	2,130	400	700	1,540	260	760
Political scientists	1,060	330	S	150	90	200	220	S	S
Sociologists and anthropologists	3,560	1,480	S	500	290	400	480	380	S
S&T historians and other social scientists	2,200	780	S	310	290	330	290	180	S
Postsecondary teachers, social sciences	31,670	30,540	1,070	S	S	S	S	S	S
Psychologists	64,910	22,530	3,400	11,340	14,890	6,200	2,260	4,260	S
Psychologists	48,580	7,070	2,590	11,340	14,860	6,180	2,260	4,260	S
Postsecondary teachers, psychology	16,320	15,470	810	S	S	S	S	S	S
Engineers	74,600	22,370	210	42,070	1,670	2,000	5,110	1,000	170
Aerospace/aeronautical engineers	4,070	410	S	2,460	110	260	800	S	S
Chemical engineers	7,610	430	S	6,390	100	270	350	S	S
Civil and architectural engineers	4,150	500	S	2,260	370	140	370	490	S
Electrical and related engineers	15,350	1,020	S	12,160	490	450	1,190	S	S
Materials/metallurgical engineers	1,050	S	S	830	S	S	110	S	S
Mechanical engineers	8,610	820	S	6,710	130	350	530	S	S
Other engineers	16,690	2,240	S	11,270	420	520	1,750	410	60
Postsecondary teachers, engineering	17,080	16,900	190	S	S	S	S	S	S
Non-S&E occupations	136,630	41,650	5,900	57,130	8,950	9,830	7,620	5,140	420
Top/mid-level managers, administrators, etc	66,070	14,400	1,510	34,800	1,760	5,240	4,850	3,190	310
Health and related occupations	17,270	5,710	90	5,720	1,690	2,250	1,100	720	S
Teachers, except S&E postsecondary teachers	23,700	19,310	3,720	160	250	120	S	70	S
Social services and related occupations	2,350	360	330	210	150	940	S	320	S
Technicians/technologists	7,530	530	S	5,530	330	290	540	270	S
Sales and marketing occupations	6,190	100	S	4,680	1,340	S	S	S	S
Other non-S&E occupations	13,520	1,240	230	6,040	3,430	960	1,040	520	60

See explanatory information and SOURCE at end of table.

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Table 33. Employed doctoral scientists and engineers, by occupation and sector of employment: 1999

Page 2 of 2

Occupation	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
	[Percent]								
All occupations	100.0	43.4	2.8	33.6	5.5	5.0	6.7	2.7	0.3
Scientists	100.0	51.5	2.8	25.3	5.8	4.6	7.2	2.6	0.3
Computer and information scientists	100.0	23.8	0.6	66.0	2.6	3.0	3.2	0.9	S
Computer/information scientists	100.0	7.1	S	81.0	3.2	3.6	3.9	1.2	S
Postsecondary teachers, computer sciences	100.0	95.4	2.9	1.8	S	S	S	S	S
Mathematical scientists	100.0	69.8	4.0	13.9	1.1	3.3	7.0	0.5	0.3
Mathematical scientists	100.0	18.5	1.3	42.7	3.4	10.3	21.4	1.7	0.9
Postsecondary teachers, math sciences	100.0	94.6	5.4	S	S	S	S	S	S
Life and related scientists	100.0	61.9	2.0	19.9	1.6	3.9	8.8	1.7	0.1
Agricultural scientists	100.0	30.9	S	44.2	4.1	1.4	17.7	1.0	S
Biological scientists	100.0	47.1	S	28.7	2.1	6.4	12.6	2.8	0.2
Forestry and conservation scientists	100.0	31.6	S	16.1	5.7	13.3	25.3	6.2	S
Postsecondary teachers, life and related sciences	100.0	94.1	5.6	S	S	S	S	S	S
Physical and related scientists	100.0	44.2	2.8	35.9	1.4	2.9	10.8	1.8	0.2
Chemists, except biochemistry	100.0	9.9	S	75.7	1.7	2.6	7.8	2.0	S
Earth scientists	100.0	29.3	S	29.1	3.2	5.4	26.3	6.1	S
Physics and astronomers	100.0	29.0	S	35.6	1.2	7.2	24.3	2.0	0.6
Other physical scientists	100.0	15.2	S	41.9	9.6	S	28.2	S	S
Postsecondary teachers, physical and related sciences	100.0	91.8	7.7	S	S	S	S	S	S
Social scientists	100.0	75.4	2.4	6.8	2.4	3.6	5.6	1.9	1.8
Economists	100.0	16.8	S	30.6	5.7	10.1	22.2	3.7	10.9
Political scientists	100.0	30.9	S	14.5	8.1	18.9	20.7	S	S
Sociologists and anthropologists	100.0	41.5	S	14.2	8.1	11.2	13.4	10.8	S
S&T historians and other social scientists	100.0	35.3	S	14.3	13.0	14.9	13.0	8.2	S
Postsecondary teachers, social sciences	100.0	96.4	3.4	S	S	S	S	S	S
Psychologists	100.0	34.7	5.2	17.5	22.9	9.6	3.5	6.6	S
Psychologists	100.0	14.5	5.3	23.3	30.6	12.7	4.7	8.8	S
Postsecondary teachers, psychology	100.0	94.8	5.0	S	S	S	S	S	S
Engineers	100.0	30.0	0.3	56.4	2.2	2.7	6.8	1.3	0.2
Aerospace/aeronautical engineers	100.0	10.2	S	60.4	2.7	6.4	19.7	S	S
Chemical engineers	100.0	5.7	S	84.0	1.4	3.5	4.7	S	S
Civil and architectural engineers	100.0	12.2	S	54.4	8.9	3.3	8.9	11.7	S
Electrical and related engineers	100.0	6.7	S	79.2	3.2	2.9	7.7	S	S
Materials/metallurgical engineers	100.0	S	S	79.4	S	S	10.5	S	S
Mechanical engineers	100.0	9.5	S	77.9	1.6	4.1	6.2	S	S
Other engineers	100.0	13.4	S	67.5	2.5	3.1	10.5	2.5	0.3
Postsecondary teachers, engineering	100.0	98.9	1.1	S	S	S	S	S	S
Non-S&E occupations	100.0	30.5	4.3	41.8	6.5	7.2	5.6	3.8	0.3
Top/mid-level managers, administrators, etc	100.0	21.8	2.3	52.7	2.7	7.9	7.3	4.8	0.5
Health and related occupations	100.0	33.0	0.5	33.1	9.8	13.0	6.4	4.2	S
Teachers, except S&E postsecondary teachers	100.0	81.5	15.7	0.7	1.1	0.5	S	0.3	S
Social services and related occupations	100.0	15.3	14.0	8.9	6.6	40.1	S	13.7	S
Technicians/technologists	100.0	7.1	S	73.4	4.3	3.9	7.2	3.5	S
Sales and marketing occupations	100.0	1.6	S	75.5	21.6	S	S	S	S
Other non-S&E occupations	100.0	9.1	1.7	44.7	25.4	7.1	7.7	3.8	0.5

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTES Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 34. Employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 1999

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Employment sector/occupation	Total	Male	Female	Total	Male	Female
	[Number]			[Percent]		
All sectors	553,360	419,870	133,490	100.0	75.9	24.1
Scientists	342,140	251,360	90,780	100.0	73.5	26.5
Computer and information scientists	32,740	28,520	4,220	100.0	87.1	12.9
Mathematical scientists	19,650	16,070	3,580	100.0	81.8	18.2
Life and related scientists	104,030	74,790	29,250	100.0	71.9	28.1
Physical and related scientists	75,350	65,640	9,710	100.0	87.1	12.9
Social scientists	45,460	32,370	13,090	100.0	71.2	28.8
Psychologists	64,910	33,980	30,930	100.0	52.4	47.6
Engineers	74,600	69,310	5,290	100.0	92.9	7.1
Non-S&E occupations	136,630	99,200	37,430	100.0	72.6	27.4
Universities and 4-year colleges	240,080	176,420	63,660	100.0	73.5	26.5
Scientists	176,060	129,440	46,620	100.0	73.5	26.5
Computer and information scientists	7,780	6,680	1,100	100.0	85.9	14.1
Mathematical scientists	13,710	11,340	2,370	100.0	82.7	17.3
Life and related scientists	64,420	45,930	18,490	100.0	71.3	28.7
Physical and related scientists	33,320	28,550	4,770	100.0	85.7	14.3
Social scientists	34,300	24,800	9,490	100.0	72.3	27.7
Psychologists	22,530	12,140	10,390	100.0	53.9	46.1
Engineers	22,370	20,640	1,730	100.0	92.3	7.7
Non-S&E occupations	41,650	26,340	15,310	100.0	63.2	36.8
Other educational institutions	15,710	9,440	6,260	100.0	60.1	39.9
Scientists	9,600	6,120	3,480	100.0	63.7	36.3
Computer and information scientists	190	140	60	100.0	71.3	28.7
Mathematical scientists	790	590	210	100.0	74.1	25.9
Life and related scientists	2,040	1,290	750	100.0	63.1	36.9
Physical and related scientists	2,070	1,860	220	100.0	89.6	10.4
Social scientists	1,090	740	350	100.0	68.1	31.9
Psychologists	3,400	1,500	1,900	100.0	44.1	55.9
Engineers	210	180	S	100.0	86.9	S
Non-S&E occupations	5,900	3,150	2,750	100.0	53.3	46.7
Private-for-profit	185,720	155,560	30,160	100.0	83.8	16.2
Scientists	86,520	69,050	17,480	100.0	79.8	20.2
Computer and information scientists	21,610	18,940	2,660	100.0	87.7	12.3
Mathematical scientists	2,740	2,240	500	100.0	81.9	18.1
Life and related scientists	20,720	15,660	5,060	100.0	75.6	24.4
Physical and related scientists	27,020	23,610	3,410	100.0	87.4	12.6
Social scientists	3,110	2,260	840	100.0	72.9	27.1
Psychologists	11,340	6,330	5,010	100.0	55.8	44.2
Engineers	42,070	39,180	2,880	100.0	93.1	6.9
Non-S&E occupations	57,130	47,330	9,800	100.0	82.8	17.2
Self-employed	30,400	18,990	11,420	100.0	62.5	37.5
Scientists	19,780	10,750	9,030	100.0	54.4	45.6
Computer and information scientists	850	790	60	100.0	92.7	7.3
Mathematical scientists	220	160	50	100.0	75.8	24.2
Life and related scientists	1,670	1,160	520	100.0	69.2	30.8
Physical and related scientists	1,070	990	70	100.0	93.0	7.0
Social scientists	1,090	670	420	100.0	61.9	38.1
Psychologists	14,890	6,980	7,910	100.0	46.9	53.1
Engineers	1,670	1,670	S	100.0	99.9	S
Non-S&E occupations	8,950	6,560	2,380	100.0	73.4	26.6

See explanatory information and SOURCE at end of table.

Table 34. Employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 1999

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Employment sector/occupation	Total	Male	Female	Total	Male	Female
	[Number]			[Percent]		
Private not-for-profit	27,540	17,960	9,580	100.0	65.2	34.8
Scientists	15,710	10,040	5,670	100.0	63.9	36.1
Computer and information scientists	970	890	80	100.0	91.8	8.2
Mathematical scientists	660	500	160	100.0	75.7	24.3
Life and related scientists	4,050	2,720	1,330	100.0	67.2	32.8
Physical and related scientists	2,200	1,870	330	100.0	85.0	15.0
Social scientists	1,640	980	660	100.0	59.5	40.5
Psychologists	6,200	3,090	3,120	100.0	49.8	50.2
Engineers	2,000	1,950	50	100.0	97.3	2.7
Non-S&E occupations	9,830	5,980	3,850	100.0	60.8	39.2
Federal Government	37,250	29,620	7,630	100.0	79.5	20.5
Scientists	24,530	19,140	5,390	100.0	78.0	22.0
Computer and information scientists	1,030	890	150	100.0	85.7	14.3
Mathematical scientists	1,370	1,090	280	100.0	79.4	20.6
Life and related scientists	9,160	6,570	2,600	100.0	71.7	28.3
Physical and related scientists	8,160	7,370	790	100.0	90.3	9.7
Social scientists	2,540	1,720	830	100.0	67.5	32.5
Psychologists	2,260	1,510	740	100.0	67.0	33.0
Engineers	5,110	4,680	430	100.0	91.6	8.4
Non-S&E occupations	7,620	5,800	1,820	100.0	76.1	23.9
State and local government	14,870	10,560	4,320	100.0	71.0	29.0
Scientists	8,740	5,890	2,840	100.0	67.5	32.5
Computer and information scientists	310	200	110	100.0	65.0	35.0
Mathematical scientists	110	110	S	100.0	100.0	S
Life and related scientists	1,810	1,350	470	100.0	74.3	25.7
Physical and related scientists	1,390	1,280	110	100.0	92.0	8.0
Social scientists	870	530	330	100.0	61.6	38.4
Psychologists	4,260	2,430	1,830	100.0	57.1	42.9
Engineers	1,000	890	110	100.0	89.5	10.5
Non-S&E occupations	5,140	3,770	1,370	100.0	73.4	26.6
Other sector	1,790	1,330	460	100.0	74.1	25.9
Scientists	1,190	930	260	100.0	77.9	22.1
Computer and information scientists	S	S	S	S	S	S
Mathematical scientists	60	S	S	100.0	S	S
Life and related scientists	150	110	S	100.0	71.4	S
Physical and related scientists	120	120	S	100.0	96.7	S
Social scientists	830	650	170	100.0	78.9	21.1
Psychologists	S	S	S	S	S	S
Engineers	170	120	60	100.0	67.4	32.6
Non-S&E occupations	420	280	140	100.0	66.2	33.8

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&E=science and engineering.

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 35. Employed doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1999

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Employment sector/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Number]					
All sectors	553,360	443,120	13,300	81,100	14,020	1,820
Scientists	342,140	280,320	7,460	43,730	9,340	1,280
Computer and information scientists	32,740	21,660	380	9,930	750	S
Mathematical scientists	19,650	15,440	400	3,220	570	S
Life and related scientists	104,030	84,250	1,830	14,760	2,830	360
Physical and related scientists	75,350	61,590	1,150	10,660	1,690	270
Social scientists	45,460	38,110	1,800	3,810	1,460	280
Psychologists	64,910	59,270	1,900	1,360	2,040	330
Engineers	74,600	50,680	1,190	20,990	1,620	120
Non-S&E occupations	136,630	112,120	4,640	16,390	3,060	420
Universities and 4-year colleges	240,080	198,300	7,190	26,270	7,410	920
Scientists	176,060	146,000	4,750	19,040	5,550	720
Computer and information scientists	7,780	6,100	170	1,360	140	S
Mathematical scientists	13,710	10,920	250	2,030	490	S
Life and related scientists	64,420	52,460	1,250	8,790	1,750	170
Physical and related scientists	33,320	27,960	590	3,580	990	210
Social scientists	34,300	28,700	1,510	2,660	1,200	220
Psychologists	22,530	19,860	980	620	980	100
Engineers	22,370	17,000	580	4,110	630	50
Non-S&E occupations	41,650	35,300	1,860	3,120	1,220	150
Other educational institutions	15,710	13,320	840	1,090	360	100
Scientists	9,600	8,330	320	710	200	S
Computer and information scientists	190	170	S	S	S	S
Mathematical scientists	790	610	S	170	S	S
Life and related scientists	2,040	1,780	S	150	70	S
Physical and related scientists	2,070	1,750	90	200	S	S
Social scientists	1,090	960	70	S	S	S
Psychologists	3,400	3,060	100	130	80	S
Engineers	210	150	S	60	S	S
Non-S&E occupations	5,900	4,850	520	320	170	50
Private-for-profit	185,720	135,170	2,520	43,790	3,870	370
Scientists	86,520	64,770	1,120	18,430	2,030	180
Computer and information scientists	21,610	13,040	150	7,830	580	S
Mathematical scientists	2,740	1,880	100	720	S	S
Life and related scientists	20,720	15,980	260	3,700	690	100
Physical and related scientists	27,020	20,660	370	5,560	400	S
Social scientists	3,110	2,610	60	380	S	S
Psychologists	11,340	10,590	180	240	290	S
Engineers	42,070	25,890	500	14,930	700	S
Non-S&E occupations	57,130	44,510	910	10,430	1,130	150
Self-employed	30,400	27,710	390	1,600	560	150
Scientists	19,780	18,570	240	440	390	130
Computer and information scientists	850	720	S	120	S	S
Mathematical scientists	220	190	S	S	S	S
Life and related scientists	1,670	1,530	S	100	S	S
Physical and related scientists	1,070	940	S	120	S	S
Social scientists	1,090	1,010	S	S	S	S
Psychologists	14,890	14,180	230	70	310	90
Engineers	1,670	1,410	S	210	S	S
Non-S&E occupations	8,950	7,730	130	940	130	S

See explanatory information and SOURCE at end of table.

Table 35. Employed doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1999

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Employment sector/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Number]					
Private not-for-profit	27,540	23,460	760	2,710	520	80
Scientists	15,710	13,560	280	1,510	290	70
Computer and information scientists	970	630	S	310	S	S
Mathematical scientists	660	600	S	S	S	S
Life and related scientists	4,050	3,360	50	520	90	S
Physical and related scientists	2,200	1,900	S	280	S	S
Social scientists	1,640	1,350	S	230	S	S
Psychologists	6,200	5,730	140	140	150	S
Engineers	2,000	1,310	S	610	70	S
Non-S&E occupations	9,830	8,590	480	600	150	S
Federal Government	37,250	31,840	890	3,670	730	120
Scientists	24,530	20,850	460	2,600	520	90
Computer and information scientists	1,030	840	S	170	S	S
Mathematical scientists	1,370	1,070	S	260	S	S
Life and related scientists	9,160	7,490	180	1,300	160	S
Physical and related scientists	8,160	7,110	90	720	210	S
Social scientists	2,540	2,230	100	130	50	S
Psychologists	2,260	2,110	70	S	60	S
Engineers	5,110	4,290	50	680	70	S
Non-S&E occupations	7,620	6,690	370	390	140	S
State and local government	14,870	12,100	610	1,710	380	80
Scientists	8,740	7,420	280	770	220	S
Computer and information scientists	310	160	S	120	S	S
Mathematical scientists	110	110	S	S	S	S
Life and related scientists	1,810	1,550	S	190	S	S
Physical and related scientists	1,390	1,150	S	200	S	S
Social scientists	870	720	S	120	S	S
Psychologists	4,260	3,740	200	140	160	S
Engineers	1,000	530	S	360	70	S
Non-S&E occupations	5,140	4,150	300	580	90	S
Other sector	1,790	1,220	100	270	190	S
Scientists	1,190	820	S	230	130	S
Computer and information scientists	S	S	S	S	S	S
Mathematical scientists	60	60	S	S	S	S
Life and related scientists	150	120	S	S	S	S
Physical and related scientists	120	110	S	S	S	S
Social scientists	830	520	S	200	80	S
Psychologists	S	S	S	S	S	S
Engineers	170	110	S	S	S	S
Non-S&E occupations	420	300	80	S	S	S

See explanatory information and SOURCE at end of table.

Table 35. Employed doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1999

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Employment sector/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Percent]					
All sectors	100.0	80.1	2.4	14.7	2.5	0.3
Scientists	100.0	81.9	2.2	12.8	2.7	0.4
Computer and information scientists	100.0	66.2	1.2	30.3	2.3	S
Mathematical scientists	100.0	78.6	2.0	16.4	2.9	S
Life and related scientists	100.0	81.0	1.8	14.2	2.7	0.3
Physical and related scientists	100.0	81.7	1.5	14.1	2.2	0.4
Social scientists	100.0	83.8	4.0	8.4	3.2	0.6
Psychologists	100.0	91.3	2.9	2.1	3.1	0.5
Engineers	100.0	67.9	1.6	28.1	2.2	0.2
Non-S&E occupations	100.0	82.1	3.4	12.0	2.2	0.3
Universities and 4-year colleges	100.0	82.6	3.0	10.9	3.1	0.4
Scientists	100.0	82.9	2.7	10.8	3.2	0.4
Computer and information scientists	100.0	78.4	2.2	17.5	1.8	S
Mathematical scientists	100.0	79.7	1.9	14.8	3.6	S
Life and related scientists	100.0	81.4	1.9	13.6	2.7	0.3
Physical and related scientists	100.0	83.9	1.8	10.7	3.0	0.6
Social scientists	100.0	83.7	4.4	7.8	3.5	0.6
Psychologists	100.0	88.1	4.3	2.7	4.3	0.4
Engineers	100.0	76.0	2.6	18.4	2.8	0.2
Non-S&E occupations	100.0	84.8	4.5	7.5	2.9	0.4
Other educational institutions	100.0	84.8	5.3	6.9	2.3	0.6
Scientists	100.0	86.8	3.3	7.4	2.1	S
Computer and information scientists	100.0	90.4	S	S	S	S
Mathematical scientists	100.0	77.0	S	21.1	S	S
Life and related scientists	100.0	87.0	S	7.4	3.2	S
Physical and related scientists	100.0	84.1	4.3	9.8	S	S
Social scientists	100.0	87.7	6.1	S	S	S
Psychologists	100.0	90.0	3.0	3.8	2.2	S
Engineers	100.0	69.7	S	29.1	S	S
Non-S&E occupations	100.0	82.1	8.8	5.4	2.8	0.9
Private-for-profit	100.0	72.8	1.4	23.6	2.1	0.2
Scientists	100.0	74.9	1.3	21.3	2.4	0.2
Computer and information scientists	100.0	60.3	0.7	36.3	2.7	S
Mathematical scientists	100.0	68.8	3.7	26.2	S	S
Life and related scientists	100.0	77.1	1.3	17.8	3.3	0.5
Physical and related scientists	100.0	76.5	1.4	20.6	1.5	S
Social scientists	100.0	84.2	2.0	12.3	S	S
Psychologists	100.0	93.4	1.6	2.1	2.5	S
Engineers	100.0	61.5	1.2	35.5	1.7	S
Non-S&E occupations	100.0	77.9	1.6	18.3	2.0	0.3
Self-employed	100.0	91.2	1.3	5.3	1.8	0.5
Scientists	100.0	93.9	1.2	2.2	2.0	0.7
Computer and information scientists	100.0	84.1	S	13.7	S	S
Mathematical scientists	100.0	89.5	S	S	S	S
Life and related scientists	100.0	91.2	S	6.0	S	S
Physical and related scientists	100.0	88.6	S	10.8	S	S
Social scientists	100.0	92.8	S	S	S	S
Psychologists	100.0	95.3	1.5	0.5	2.1	0.6
Engineers	100.0	84.2	S	12.7	S	S
Non-S&E occupations	100.0	86.4	1.5	10.5	1.5	S

See explanatory information and SOURCE at end of table.

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Table 35. Employed doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1999

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Employment sector/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
	[Percent]					
Private not-for-profit	100.0	85.2	2.8	9.9	1.9	0.3
Scientists	100.0	86.3	1.8	9.6	1.9	0.4
Computer and information scientists	100.0	65.3	S	32.5	S	S
Mathematical scientists	100.0	90.8	S	S	S	S
Life and related scientists	100.0	82.9	1.3	12.7	2.2	S
Physical and related scientists	100.0	86.3	S	12.6	S	S
Social scientists	100.0	82.3	S	14.2	S	S
Psychologists	100.0	92.4	2.3	2.3	2.4	S
Engineers	100.0	65.5	S	30.4	3.5	S
Non-S&E occupations	100.0	87.4	4.9	6.1	1.6	S
Federal Government	100.0	85.5	2.4	9.9	2.0	0.3
Scientists	100.0	85.0	1.9	10.6	2.1	0.4
Computer and information scientists	100.0	81.0	S	16.0	S	S
Mathematical scientists	100.0	78.3	S	19.3	S	S
Life and related scientists	100.0	81.8	1.9	14.2	1.8	S
Physical and related scientists	100.0	87.1	1.1	8.8	2.6	S
Social scientists	100.0	87.8	3.8	5.3	2.1	S
Psychologists	100.0	93.2	3.1	S	2.5	S
Engineers	100.0	84.1	1.0	13.3	1.4	S
Non-S&E occupations	100.0	87.9	4.9	5.1	1.9	S
State and local government	100.0	81.3	4.1	11.5	2.5	0.5
Scientists	100.0	84.9	3.2	8.8	2.5	S
Computer and information scientists	100.0	52.5	S	37.6	S	S
Mathematical scientists	100.0	100.0	S	S	S	S
Life and related scientists	100.0	85.3	S	10.4	S	S
Physical and related scientists	100.0	82.8	S	14.6	S	S
Social scientists	100.0	83.1	S	14.0	S	S
Psychologists	100.0	87.8	4.8	3.2	3.7	S
Engineers	100.0	52.8	S	36.4	6.9	S
Non-S&E occupations	100.0	80.7	5.7	11.2	1.7	S
Other sector	100.0	68.5	5.5	14.9	10.5	S
Scientists	100.0	68.5	S	19.2	10.8	S
Computer and information scientists	100.0	S	S	S	S	S
Mathematical scientists	100.0	100.0	S	S	S	S
Life and related scientists	100.0	75.6	S	S	S	S
Physical and related scientists	100.0	93.1	S	S	S	S
Social scientists	100.0	63.2	S	24.7	10.0	S
Psychologists	100.0	S	S	S	S	S
Engineers	100.0	63.4	S	S	S	S
Non-S&E occupations	100.0	70.6	19.8	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&E=science and engineering.

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 36. Employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 1999

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Occupation	Total	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Development	Design					
	[Number]										
All occupations	553,360	352,430	194,220	140,520	70,480	36,990	179,030	207,720	69,590	90,900	23,550
Scientists	342,140	237,500	128,390	121,360	33,230	14,260	131,520	99,670	45,120	57,070	11,250
Computer and information scientists	32,740	19,620	8,900	3,530	4,040	5,500	6,380	8,830	22,330	840	780
Computer/information scientists	26,550	16,000	7,400	1,400	3,910	5,440	760	7,950	20,840	740	550
Postsecondary teachers, computer sciences	6,190	3,630	1,500	2,130	120	50	5,620	880	1,490	100	230
Mathematical scientists	19,650	14,400	6,670	8,060	680	470	13,150	3,220	3,700	700	430
Mathematical scientists	6,410	5,590	4,620	1,290	560	470	360	1,630	2,860	440	90
Postsecondary teachers, math sciences	13,230	8,810	2,050	6,770	120	S	12,790	1,590	830	260	340
Life and related scientists	104,030	88,010	48,020	55,690	9,770	2,240	34,210	32,100	6,350	6,930	3,670
Agricultural scientists	8,560	7,600	6,410	2,210	2,160	250	410	3,390	640	440	480
Biological scientists	58,160	53,590	32,850	34,240	6,920	1,720	3,320	21,370	4,540	4,300	1,700
Forestry and conservation scientists	1,190	900	800	300	150	60	90	520	130	70	110
Postsecondary teachers, life and related sciences	36,130	25,920	7,960	18,950	540	210	30,390	6,810	1,040	2,120	1,370
Physical and related scientists	75,350	61,610	34,820	29,270	15,450	4,940	26,170	19,940	8,510	2,530	2,420
Chemists, except biochemistry	24,840	22,600	17,250	5,570	10,740	1,990	530	8,300	1,550	550	1,120
Earth scientists	9,630	8,600	5,900	4,130	1,210	670	330	3,050	2,450	460	290
Physics and astronomers	13,460	12,360	7,650	5,510	2,990	2,080	670	3,110	3,030	770	450
Other physical scientists	1,330	1,010	670	260	300	140	S	570	210	150	50
Postsecondary teachers, physical and related sciences	26,070	17,040	3,350	13,790	210	60	24,610	4,910	1,270	600	510
Social scientists	45,460	34,030	18,760	16,410	1,740	550	30,540	10,330	2,640	3,160	1,880
Economists	6,970	5,820	5,130	1,140	640	300	260	3,170	910	1,280	280
Political scientists	1,060	720	570	230	80	S	60	690	50	130	100
Sociologists and anthropologists	3,560	3,070	2,430	1,190	290	S	350	1,340	360	380	200
S&T historians and other social scientists	2,200	1,920	1,660	310	260	60	110	800	340	250	190
Postsecondary teachers, social sciences	31,670	22,500	8,970	13,540	460	170	29,760	4,330	970	1,120	1,120
Psychologists	64,910	19,820	11,210	8,410	1,550	570	21,060	25,250	1,590	42,920	2,070
Psychologists	48,580	9,660	7,180	2,150	1,360	560	5,790	22,130	1,140	41,510	1,650
Postsecondary teachers, psychology	16,320	10,170	4,030	6,250	190	S	15,280	3,120	460	1,400	420

See explanatory information and SOURCE at end of table.

Table 36. Employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 1999

Occupation	Total	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Development	Design					
	[Number]										
Engineers	74,600	63,270	37,730	9,230	23,740	16,460	16,790	21,050	13,040	3,200	3,000
Aerospace/aeronautical engineers	4,070	3,690	2,150	470	1,280	1,100	S	1,260	1,350	120	100
Chemical engineers	7,610	7,030	4,240	530	4,170	2,030	170	2,330	880	130	310
Civil and architectural engineers	4,150	2,890	1,590	260	530	1,330	310	1,960	970	710	190
Electrical and related engineers	15,350	13,760	7,150	900	7,480	4,650	210	4,370	3,830	410	520
Materials/metallurgical engineers	1,050	620	280	S	130	360	S	470	340	140	200
Mechanical engineers	8,610	7,790	4,500	790	3,720	2,600	240	2,030	2,240	220	400
Other engineers	16,690	14,300	8,640	2,040	5,220	4,080	370	5,800	2,690	1,260	1,090
Postsecondary teachers, engineering	17,080	13,190	9,190	4,210	210	320	15,420	2,840	730	200	200
Non-S&E occupations	136,630	51,660	28,100	9,930	13,510	6,270	30,710	87,000	11,440	30,630	9,300
Top/mid-level managers, administrators, etc.	66,070	22,750	10,760	1,920	8,220	3,700	3,370	60,510	3,820	6,970	3,170
Health and related occupations	17,270	5,180	3,580	1,490	620	360	3,990	6,140	610	13,190	590
Teachers, except S&E postsecondary teachers	23,700	12,820	7,870	4,720	720	140	21,340	5,110	1,040	2,600	820
Social services and related occupations	2,350	370	180	80	130	S	770	990	220	1,670	250
Technicians/technologists	7,530	4,920	3,020	840	1,760	1,110	230	1,990	4,000	240	380
Sales and marketing occupations	6,190	1,610	720	110	740	280	220	5,520	440	990	310
Other non-S&E occupations	13,520	4,010	1,980	770	1,330	640	790	6,740	1,320	4,970	3,770

See explanatory information and SOURCE at end of table.

Table 36. Employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 1999

Occupation	Total	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Development	Design					
	[Percent]										
All occupations	100.0	63.7	35.1	25.4	12.7	6.7	32.4	37.5	12.6	16.4	4.3
Scientists	100.0	69.4	37.5	35.5	9.7	4.2	38.4	29.1	13.2	16.7	3.3
Computer and information scientists	100.0	59.9	27.2	10.8	12.3	16.8	19.5	27.0	68.2	2.6	2.4
Computer/information scientists	100.0	60.2	27.9	5.3	14.7	20.5	2.9	29.9	78.5	2.8	2.1
Postsecondary teachers, computer sciences	100.0	58.6	24.3	34.3	2.0	0.9	90.8	14.3	24.1	1.6	3.7
Mathematical scientists	100.0	73.3	34.0	41.0	3.5	2.4	66.9	16.4	18.8	3.6	2.2
Mathematical scientists	100.0	87.2	72.1	20.1	8.7	7.3	5.6	25.4	44.7	6.9	1.4
Postsecondary teachers, math sciences	100.0	66.6	15.5	51.2	0.9	S	96.6	12.0	6.3	2.0	2.5
Life and related scientists	100.0	84.6	45.2	53.5	9.4	2.2	32.9	30.9	6.1	6.7	3.5
Agricultural scientists	100.0	88.8	74.9	25.8	25.2	3.0	4.8	39.6	7.4	5.2	5.7
Biological scientists	100.0	92.1	56.5	58.9	11.9	3.0	5.7	36.7	7.8	7.4	2.9
Forestry and conservation scientists	100.0	76.0	67.4	25.0	12.5	4.7	7.5	43.6	10.9	5.9	9.4
Postsecondary teachers, life and related sciences	100.0	71.7	22.0	52.4	1.5	0.6	84.1	18.9	2.9	5.9	3.8
Physical and related scientists	100.0	81.8	46.2	38.8	20.5	6.6	34.7	26.5	11.3	3.4	3.2
Chemists, except biochemistry	100.0	90.9	69.4	22.4	43.2	8.0	2.1	33.4	6.2	2.2	4.5
Earth scientists	100.0	89.3	61.2	42.9	12.6	7.0	3.5	31.6	25.5	4.8	3.0
Physics and astronomers	100.0	91.8	56.8	40.9	22.2	15.4	4.9	23.1	22.5	5.7	3.3
Other physical scientists	100.0	75.8	50.5	19.7	22.3	10.4	S	42.9	15.8	10.9	3.9
Postsecondary teachers, physical and related sciences	100.0	65.4	12.8	52.9	0.8	0.2	94.4	18.8	4.9	2.3	1.9
Social scientists	100.0	74.9	41.3	36.1	3.8	1.2	67.2	22.7	5.8	7.0	4.1
Economists	100.0	83.5	73.6	16.4	9.2	4.2	3.8	45.5	13.1	18.3	4.1
Political scientists	100.0	67.7	53.9	21.8	8.0	S	5.9	65.3	4.8	12.6	9.2
Sociologists and anthropologists	100.0	86.3	68.3	33.4	8.1	S	9.9	37.6	10.2	10.7	5.5
S&T historians and other social scientists	100.0	87.4	75.7	13.9	12.0	2.7	4.8	36.4	15.3	11.2	8.4
Postsecondary teachers, social sciences	100.0	71.0	28.3	42.7	1.4	0.5	94.0	13.7	3.1	3.5	3.5
Psychologists	100.0	30.5	17.3	13.0	2.4	0.9	32.5	38.9	2.5	66.1	3.2
Psychologists	100.0	19.9	14.8	4.4	2.8	1.1	11.9	45.5	2.3	85.5	3.4
Postsecondary teachers, psychology	100.0	62.3	24.7	38.3	1.2	S	93.6	19.1	2.8	8.6	2.6

See explanatory information and SOURCE at end of table.

Table 36. Employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 1999

Occupation	Total	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Development	Design					
	[Percent]										
Engineers	100.0	84.8	50.6	12.4	31.8	22.1	22.5	28.2	17.5	4.3	4.0
Aerospace/aeronautical engineers	100.0	90.5	52.8	11.5	31.5	27.1	S	30.8	33.2	2.9	2.4
Chemical engineers	100.0	92.4	55.7	7.0	54.9	26.6	2.3	30.7	11.6	1.7	4.0
Civil and architectural engineers	100.0	69.6	38.3	6.2	12.7	32.0	7.5	47.2	23.3	17.2	4.6
Electrical and related engineers	100.0	89.7	46.6	5.8	48.7	30.3	1.4	28.5	25.0	2.6	3.4
Materials/metallurgical engineers	100.0	59.1	26.6	S	12.9	34.8	S	44.5	32.6	13.7	19.0
Mechanical engineers	100.0	90.5	52.3	9.2	43.3	30.2	2.8	23.6	26.0	2.6	4.6
Other engineers	100.0	85.7	51.8	12.3	37.2	24.4	2.2	34.7	16.1	7.6	6.5
Postsecondary teachers, engineering	100.0	77.2	53.8	24.6	1.2	1.9	90.3	16.6	4.3	1.2	1.2
Non-S&E occupations	100.0	37.8	20.6	7.3	9.9	4.6	22.5	63.7	8.4	22.4	6.8
Top/mid-level managers, administrators, etc.	100.0	34.4	16.3	2.9	12.4	5.6	5.1	91.6	5.8	10.5	4.8
Health and related occupations	100.0	30.0	20.7	8.6	3.6	2.1	23.1	35.6	3.5	76.4	3.4
Teachers, except S&E postsecondary teachers	100.0	54.1	33.2	19.9	3.0	0.6	90.0	21.6	4.4	11.0	3.5
Social services and related occupations	100.0	15.9	7.5	3.6	5.7	S	32.9	41.9	9.2	71.0	10.8
Technicians/technologists	100.0	65.3	40.1	11.2	23.3	14.8	3.1	26.4	53.1	3.2	5.1
Sales and marketing occupations	100.0	26.0	11.6	1.7	12.0	4.5	3.5	89.1	7.1	16.0	5.0
Other non-S&E occupations	100.0	29.6	14.6	5.7	9.8	4.8	5.8	49.9	9.8	36.8	27.9

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases). S&E=science and engineering.

NOTES: Numbers are rounded to nearest ten. Details exceed total due to multiple responses.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 37. Employed doctoral scientists and engineers, by employer location and broad occupation: 1999

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Employer location	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
	[Number]									
All locations	553,360	342,140	32,740	19,650	104,030	75,350	45,460	64,910	74,600	136,630
New England	45,830	30,170	3,350	1,620	9,220	5,890	4,200	5,900	5,480	10,170
Connecticut	9,790	6,760	370	230	2,320	1,480	730	1,640	820	2,210
Maine	2,130	1,390	S	S	420	290	260	340	180	560
Massachusetts	27,270	17,860	2,370	1,110	5,600	3,200	2,550	3,030	3,380	6,020
New Hampshire	2,280	1,450	360	80	230	400	110	270	470	370
Rhode Island	2,620	1,680	130	130	350	370	310	370	340	600
Vermont	1,730	1,030	70	S	290	150	240	250	290	410
Middle Atlantic	89,740	57,200	6,090	3,140	15,340	12,250	7,760	12,620	10,210	22,330
New Jersey	21,710	13,220	2,370	760	3,260	3,560	1,260	2,010	3,310	5,180
New York	42,680	27,610	2,490	1,570	7,150	4,590	4,200	7,610	3,900	11,170
Pennsylvania	25,350	16,370	1,240	810	4,930	4,100	2,300	3,000	3,010	5,980
East North Central	76,390	45,480	3,550	2,910	13,450	10,550	6,310	8,700	11,760	19,150
Illinois	22,310	13,460	1,710	850	4,050	2,980	1,730	2,130	2,660	6,190
Indiana	8,810	5,690	290	460	1,410	1,280	1,060	1,190	1,130	1,990
Michigan	16,600	9,460	620	690	2,750	2,150	1,270	1,970	3,590	3,560
Ohio	20,200	11,790	620	700	3,440	3,060	1,630	2,340	3,440	4,970
Wisconsin	8,460	5,090	300	210	1,800	1,080	620	1,070	940	2,440
West North Central	33,620	22,110	1,040	1,170	8,590	3,670	3,090	4,550	3,560	7,950
Iowa	4,370	3,100	140	320	1,150	480	590	420	390	880
Kansas	3,550	2,590	150	110	1,140	260	290	650	360	610
Minnesota	11,400	6,600	300	310	2,180	1,250	990	1,570	1,540	3,260
Missouri	9,420	6,160	350	290	2,400	1,170	870	1,080	940	2,310
Nebraska	1,260	980	S	70	450	130	90	250	140	140
North Dakota	2,630	1,990	80	S	990	320	190	380	140	500
South Dakota	1,000	690	S	S	280	70	70	190	S	260
South Atlantic	104,570	66,800	5,640	4,730	21,210	13,850	10,620	10,760	10,640	27,130
Delaware	3,680	2,280	260	S	730	920	110	210	490	900
District of Columbia	13,830	8,530	380	550	1,450	1,320	3,940	890	520	4,780
Florida	14,640	8,930	720	540	2,290	1,590	1,350	2,440	1,860	3,850
Georgia	11,040	7,490	650	510	2,590	1,300	1,130	1,320	870	2,670
Maryland	22,340	15,510	1,360	1,300	6,390	3,420	1,120	1,920	2,320	4,500
North Carolina	15,700	10,090	820	720	4,250	1,820	900	1,590	1,340	4,270
South Carolina	4,700	2,810	70	170	1,000	680	450	440	830	1,060
Virginia	16,610	9,670	1,320	820	2,020	2,340	1,390	1,780	2,140	4,790
West Virginia	2,050	1,480	50	80	480	460	220	180	270	310
East South Central	21,090	13,200	680	1,080	4,520	2,620	1,840	2,460	3,010	4,880
Alabama	5,770	3,380	190	420	1,050	590	360	760	940	1,450
Kentucky	4,130	2,760	160	370	860	310	620	440	200	1,170
Mississippi	3,100	1,880	50	120	880	430	220	170	480	740
Tennessee	8,090	5,180	280	170	1,720	1,290	640	1,080	1,390	1,530

See explanatory information and SOURCE at end of table.

Table 37. Employed doctoral scientists and engineers, by employer location and broad occupation: 1999

Employer location	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
	[Number]									
West South Central	43,570	26,510	2,650	1,360	8,360	6,530	3,200	4,400	7,190	9,870
Arkansas	2,700	1,960	S	140	910	290	330	260	150	600
Louisiana	5,440	3,450	120	270	1,280	830	410	520	710	1,290
Oklahoma	4,160	2,790	100	50	800	770	360	710	560	820
Texas	31,260	18,320	2,390	910	5,360	4,650	2,100	2,920	5,780	7,160
Mountain	36,080	21,120	1,640	1,330	5,190	6,990	2,370	3,600	6,270	8,690
Arizona	6,520	3,420	250	120	830	1,010	550	670	1,410	1,680
Colorado	11,250	6,800	650	420	1,680	1,940	670	1,430	1,540	2,910
Idaho	2,040	1,000	S	S	310	280	110	220	480	560
Montana	1,520	1,220	S	180	370	190	190	250	70	220
New Mexico	7,630	4,150	300	230	670	2,410	230	310	1,670	1,810
Nevada	1,850	1,300	90	110	180	520	150	260	280	260
Utah	4,540	2,640	240	180	1,020	390	370	430	750	1,160
Wyoming	740	590	S	50	140	250	90	S	50	90
Pacific	100,690	58,450	8,050	2,260	17,640	12,800	5,950	11,760	16,320	25,920
Alaska	1,180	790	70	S	280	220	90	130	90	300
California	77,110	43,650	6,320	1,750	12,140	10,310	4,150	8,990	13,510	19,940
Hawaii	2,500	1,790	100	80	660	300	360	300	160	550
Oregon	6,650	4,020	430	150	1,720	620	520	590	1,060	1,570
Washington	13,250	8,200	1,140	280	2,840	1,340	840	1,750	1,490	3,560
Puerto Rico	1,230	800	S	S	350	170	90	140	120	320
Other U.S. territories and other areas	530	280	S	S	170	S	S	S	S	220

See explanatory information and SOURCE at end of table.

Table 37. Employed doctoral scientists and engineers, by employer location and broad occupation: 1999

Employer location	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
	[Percentage distribution]									
All locations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
New England	8.3	8.8	10.2	8.3	8.9	7.8	9.2	9.1	7.3	7.4
Connecticut	1.8	2.0	1.1	1.2	2.2	2.0	1.6	2.5	1.1	1.6
Maine	0.4	0.4	S	S	0.4	0.4	0.6	0.5	0.2	0.4
Massachusetts	4.9	5.2	7.2	5.6	5.4	4.2	5.6	4.7	4.5	4.4
New Hampshire	0.4	0.4	1.1	0.4	0.2	0.5	0.2	0.4	0.6	0.3
Rhode Island	0.5	0.5	0.4	0.7	0.3	0.5	0.7	0.6	0.5	0.4
Vermont	0.3	0.3	0.2	S	0.3	0.2	0.5	0.4	0.4	0.3
Middle Atlantic	16.2	16.7	18.6	16.0	14.7	16.3	17.1	19.4	13.7	16.3
New Jersey	3.9	3.9	7.2	3.9	3.1	4.7	2.8	3.1	4.4	3.8
New York	7.7	8.1	7.6	8.0	6.9	6.1	9.2	11.7	5.2	8.2
Pennsylvania	4.6	4.8	3.8	4.1	4.7	5.4	5.1	4.6	4.0	4.4
East North Central	13.8	13.3	10.8	14.8	12.9	14.0	13.9	13.4	15.8	14.0
Illinois	4.0	3.9	5.2	4.3	3.9	4.0	3.8	3.3	3.6	4.5
Indiana	1.6	1.7	0.9	2.4	1.4	1.7	2.3	1.8	1.5	1.5
Michigan	3.0	2.8	1.9	3.5	2.6	2.9	2.8	3.0	4.8	2.6
Ohio	3.7	3.4	1.9	3.5	3.3	4.1	3.6	3.6	4.6	3.6
Wisconsin	1.5	1.5	0.9	1.1	1.7	1.4	1.4	1.6	1.3	1.8
West North Central	6.1	6.5	3.2	6.0	8.3	4.9	6.8	7.0	4.8	5.8
Iowa	0.8	0.9	0.4	1.6	1.1	0.6	1.3	0.6	0.5	0.6
Kansas	0.6	0.8	0.5	0.6	1.1	0.3	0.6	1.0	0.5	0.4
Minnesota	2.1	1.9	0.9	1.6	2.1	1.7	2.2	2.4	2.1	2.4
Missouri	1.7	1.8	1.1	1.5	2.3	1.6	1.9	1.7	1.3	1.7
Nebraska	0.2	0.3	S	0.4	0.4	0.2	0.2	0.4	0.2	0.1
North Dakota	0.5	0.6	0.2	S	1.0	0.4	0.4	0.6	0.2	0.4
South Dakota	0.2	0.2	S	S	0.3	0.1	0.2	0.3	S	0.2
South Atlantic	18.9	19.5	17.2	24.1	20.4	18.4	23.4	16.6	14.3	19.9
Delaware	0.7	0.7	0.8	S	0.7	1.2	0.2	0.3	0.7	0.7
District of Columbia	2.5	2.5	1.1	2.8	1.4	1.8	8.7	1.4	0.7	3.5
Florida	2.6	2.6	2.2	2.7	2.2	2.1	3.0	3.8	2.5	2.8
Georgia	2.0	2.2	2.0	2.6	2.5	1.7	2.5	2.0	1.2	2.0
Maryland	4.0	4.5	4.1	6.6	6.1	4.5	2.5	3.0	3.1	3.3
North Carolina	2.8	2.9	2.5	3.7	4.1	2.4	2.0	2.4	1.8	3.1
South Carolina	0.8	0.8	0.2	0.9	1.0	0.9	1.0	0.7	1.1	0.8
Virginia	3.0	2.8	4.0	4.2	1.9	3.1	3.1	2.7	2.9	3.5
West Virginia	0.4	0.4	0.2	0.4	0.5	0.6	0.5	0.3	0.4	0.2
East South Central	3.8	3.9	2.1	5.5	4.3	3.5	4.1	3.8	4.0	3.6
Alabama	1.0	1.0	0.6	2.1	1.0	0.8	0.8	1.2	1.3	1.1
Kentucky	0.7	0.8	0.5	1.9	0.8	0.4	1.4	0.7	0.3	0.9
Mississippi	0.6	0.5	0.2	0.6	0.9	0.6	0.5	0.3	0.6	0.5
Tennessee	1.5	1.5	0.8	0.9	1.7	1.7	1.4	1.7	1.9	1.1

See explanatory information and SOURCE at end of table.

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Table 37. Employed doctoral scientists and engineers, by employer location and broad occupation: 1999

Employer location	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
	[Percentage distribution]									
West South Central	7.9	7.7	8.1	6.9	8.0	8.7	7.0	6.8	9.6	7.2
Arkansas	0.5	0.6	S	0.7	0.9	0.4	0.7	0.4	0.2	0.4
Louisiana	1.0	1.0	0.4	1.4	1.2	1.1	0.9	0.8	1.0	0.9
Oklahoma	0.8	0.8	0.3	0.3	0.8	1.0	0.8	1.1	0.8	0.6
Texas	5.6	5.4	7.3	4.6	5.2	6.2	4.6	4.5	7.7	5.2
Mountain	6.5	6.2	5.0	6.7	5.0	9.3	5.2	5.5	8.4	6.4
Arizona	1.2	1.0	0.8	0.6	0.8	1.3	1.2	1.0	1.9	1.2
Colorado	2.0	2.0	2.0	2.1	1.6	2.6	1.5	2.2	2.1	2.1
Idaho	0.4	0.3	S	S	0.3	0.4	0.2	0.3	0.6	0.4
Montana	0.3	0.4	S	0.9	0.4	0.2	0.4	0.4	0.1	0.2
New Mexico	1.4	1.2	0.9	1.2	0.6	3.2	0.5	0.5	2.2	1.3
Nevada	0.3	0.4	0.3	0.6	0.2	0.7	0.3	0.4	0.4	0.2
Utah	0.8	0.8	0.7	0.9	1.0	0.5	0.8	0.7	1.0	0.8
Wyoming	0.1	0.2	S	0.3	0.1	0.3	0.2	S	0.1	0.1
Pacific	18.2	17.1	24.6	11.5	17.0	17.0	13.1	18.1	21.9	19.0
Alaska	0.2	0.2	0.2	S	0.3	0.3	0.2	0.2	0.1	0.2
California	13.9	12.8	19.3	8.9	11.7	13.7	9.1	13.9	18.1	14.6
Hawaii	0.5	0.5	0.3	0.4	0.6	0.4	0.8	0.5	0.2	0.4
Oregon	1.2	1.2	1.3	0.8	1.7	0.8	1.1	0.9	1.4	1.1
Washington	2.4	2.4	3.5	1.4	2.7	1.8	1.8	2.7	2.0	2.6
Puerto Rico	0.2	0.2	S	S	0.3	0.2	0.2	0.2	0.2	0.2
Other U.S. territories and other areas	0.1	0.1	S	S	0.2	S	S	S	S	0.2

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Since the survey sample design does not include geography, the reliability of estimates in some states may be poor due to small sample size.

Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 38. Employed doctoral scientists and engineers, by selected demographic characteristics and broad field of doctorate: 1999

Characteristics	Total	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social sciences	Psychology	Engineering
Number	553,360	457,470	9,600	25,300	134,360	19,310	110,300	74,300	84,300	95,890
	[Percent distribution]									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex:										
Male	75.9	72.2	83.4	86.1	72.8	44.9	87.3	70.0	54.3	93.3
Female	24.1	27.8	16.6	13.9	27.2	55.1	12.7	30.0	45.7	6.7
Race/ethnicity[1]:										
White	80.1	83.2	67.1	78.4	82.3	81.8	80.4	84.2	90.8	65.3
Black	2.4	2.6	1.7	1.8	2.0	5.4	1.4	4.2	3.3	1.6
Asian or Pacific Islander	14.7	11.3	28.9	17.0	12.9	9.5	15.8	8.2	2.3	30.6
Hispanic	2.5	2.6	2.2	2.8	2.5	2.7	2.0	3.0	3.1	2.3
American Indian/Alaskan Native	0.3	0.4	S	S	0.3	0.6	0.3	0.4	0.5	0.2
Age:										
Under 35	9.7	8.8	15.3	10.7	10.2	6.0	10.2	5.8	6.9	13.8
35 to 39	14.4	13.5	27.9	12.1	15.1	9.9	16.1	9.8	10.6	18.5
40 to 44	15.8	15.6	23.8	13.3	17.5	13.4	15.8	13.2	14.7	16.7
45 to 49	16.2	17.0	18.8	13.1	18.0	21.3	12.9	17.2	20.4	12.8
50 to 54	16.3	17.2	10.2	16.6	15.3	23.1	14.5	19.9	20.9	12.3
55 to 59	14.7	15.0	3.4	20.2	13.2	16.3	15.5	18.4	13.7	13.2
60 to 64	7.8	7.6	S	9.7	6.1	6.6	9.1	9.3	6.7	8.6
65 to 75	5.1	5.3	S	4.4	4.6	3.4	5.8	6.5	6.0	4.1
Citizenship status:										
U.S. citizen	88.8	90.8	72.4	84.6	90.2	92.1	88.7	91.0	97.8	79.7
Native	77.5	81.9	58.9	72.0	81.5	83.7	77.1	82.5	93.5	56.7
Naturalized	11.3	8.8	13.4	12.6	8.7	8.3	11.6	8.5	4.3	23.0
Non-U.S. citizen	11.2	9.2	27.6	15.4	9.8	7.9	11.3	9.0	2.2	20.3
Permanent resident	8.5	7.2	21.4	11.3	7.3	5.9	9.0	7.4	1.8	15.1
Temporary resident	2.6	2.1	6.2	4.1	2.5	2.0	2.4	1.6	0.4	5.2
Years since doctorate:										
5 years or less	21.0	19.9	41.3	17.2	21.2	29.3	17.6	19.1	17.9	25.9
6-10 years	17.3	16.9	31.8	14.9	16.8	24.1	16.0	14.1	17.9	19.2
11-15 years	14.5	14.8	15.6	11.1	14.9	16.0	13.9	14.6	16.7	13.1
16-20 years	13.4	14.2	10.3	11.7	14.6	13.0	11.8	15.6	16.6	9.8
21-25 years	13.0	13.4	1.0	14.6	13.2	9.2	12.7	16.4	14.0	10.7
More than 25 years	20.9	20.8	S	30.5	19.2	8.5	27.9	20.1	16.9	21.2
Place of birth:										
U.S.	76.7	81.1	57.4	71.4	80.6	82.8	76.4	81.9	92.4	56.0
Europe	4.0	3.9	6.6	7.2	3.1	2.5	4.5	4.4	2.6	4.6
Asia	15.5	11.5	31.8	17.5	12.7	10.3	16.1	8.9	2.2	34.2
North America	1.0	1.0	1.6	0.8	1.0	0.9	0.9	1.0	1.2	0.8
Central America	0.3	0.3	S	0.3	0.4	S	0.4	0.2	0.3	0.3
Caribbean	0.4	0.4	0.6	0.2	0.2	0.5	0.4	0.6	0.5	0.4
South America	0.8	0.7	0.8	0.9	0.8	0.6	0.5	0.8	0.4	1.2
Africa	1.2	1.0	1.0	1.3	1.0	1.7	0.8	1.8	0.2	2.2
Oceania	0.2	0.1	S	0.3	0.1	0.6	S	0.4	S	0.2

[1] The race/ethnicity data shown are for all doctoral recipients, including temporary residents. 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 39. Employed doctoral scientists and engineers, by selected demographic characteristics and broad occupation: 1999

Characteristics	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
Number	553,360	342,140	32,740	19,650	104,030	75,350	45,460	64,910	74,600	136,630
	[Percent distribution]									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex:										
Male	75.9	73.5	87.1	81.8	71.9	87.1	71.2	52.4	92.9	72.6
Female	24.1	26.5	12.9	18.2	28.1	12.9	28.8	47.6	7.1	27.4
Race/ethnicity[1]**:**										
White	80.1	81.9	66.2	78.6	81.0	81.7	83.8	91.3	67.9	82.1
Black	2.4	2.2	1.2	2.0	1.8	1.5	4.0	2.9	1.6	3.4
Asian or Pacific Islander	14.7	12.8	30.3	16.4	14.2	14.1	8.4	2.1	28.1	12.0
Hispanic	2.5	2.7	2.3	2.9	2.7	2.2	3.2	3.1	2.2	2.2
American Indian/Alaskan Native	0.3	0.4	S	S	0.3	0.4	0.6	0.5	0.2	0.3
Age:										
Under 35	9.7	10.4	13.3	10.9	11.6	11.2	8.2	7.3	14.6	5.4
35 to 39	14.4	15.4	19.9	14.8	17.4	16.9	11.2	11.4	18.6	9.5
40 to 44	15.8	16.8	18.0	16.1	18.3	16.6	14.5	16.1	17.2	12.4
45 to 49	16.2	16.6	14.5	14.7	17.2	14.4	16.8	19.7	12.2	17.5
50 to 54	16.3	15.6	15.8	14.9	13.8	13.2	18.5	19.4	11.9	20.6
55 to 59	14.7	13.1	12.9	16.0	11.8	12.9	15.6	13.1	12.8	19.6
60 to 64	7.8	7.1	4.3	8.4	5.6	9.3	9.0	6.4	8.3	9.2
65 to 75	5.1	5.0	1.3	4.1	4.5	5.5	6.2	6.5	4.4	5.7
Citizenship status:										
U.S. citizen	88.8	88.9	74.5	84.3	88.6	88.9	89.6	97.6	80.7	93.1
Native	77.5	79.9	59.7	72.0	80.0	78.4	81.3	93.3	59.8	81.3
Naturalized	11.3	9.0	14.8	12.3	8.6	10.5	8.3	4.4	20.9	11.8
Non-U.S. citizen	11.2	11.1	25.5	15.7	11.4	11.1	10.4	2.4	19.3	6.9
Permanent resident	8.5	8.4	19.1	11.5	8.3	8.5	8.4	2.0	14.3	5.8
Temporary resident	2.6	2.7	6.4	4.2	3.1	2.6	2.0	0.4	5.0	1.1
Years since doctorate:										
5 years or less	21.0	22.2	30.1	19.1	24.3	19.5	21.7	19.4	26.8	14.6
6-10 years	17.3	18.1	20.2	18.8	18.9	16.9	15.3	18.7	19.1	14.4
11-15 years	14.5	14.8	12.2	15.0	14.5	15.1	14.2	16.8	13.4	14.3
16-20 years	13.4	13.5	12.1	10.6	13.0	12.5	14.6	16.0	9.7	15.3
21-25 years	13.0	12.2	10.5	12.7	11.5	11.3	15.2	12.9	10.5	16.2
More than 25 years	20.9	19.2	14.9	23.8	17.8	24.6	19.1	16.2	20.5	25.2
Place of birth:										
U.S.	76.7	79.1	58.8	71.7	79.1	77.6	80.4	92.4	59.3	80.5
Europe	4.0	4.0	4.8	7.2	3.4	4.2	4.9	2.6	4.3	3.7
Asia	15.5	13.2	31.8	17.0	14.0	14.9	9.3	2.1	31.6	12.3
North America	1.0	1.1	1.0	1.1	1.0	0.9	1.4	1.2	0.8	0.8
Central America	0.3	0.3	S	0.4	0.5	0.4	0.2	0.4	0.4	0.2
Caribbean	0.4	0.4	0.6	S	0.2	0.4	0.6	0.6	0.3	0.4
South America	0.8	0.8	1.3	1.0	0.8	0.7	1.0	0.5	0.9	0.6
Africa	1.2	1.0	1.5	1.2	0.9	0.9	1.8	0.1	2.2	1.3
Oceania	0.2	0.2	S	0.3	0.1	S	0.5	S	0.2	0.1

[1] The race/ethnicity data shown are for all doctoral recipients, including temporary residents. 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 40. Employed doctoral scientists and engineers, by selected demographic characteristics and citizenship status: 1999

Characteristics	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Number	553,360	491,600	429,070	62,530	61,760	47,260	14,510
	[Percent distribution]						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex:							
Male	75.9	75.4	74.5	82.1	79.3	79.0	80.4
Female	24.1	24.6	25.5	17.9	20.7	21.0	19.6
Race/ethnicity[1]:							
White	80.1	86.8	94.1	36.7	26.6	26.8	26.1
Black	2.4	2.3	2.0	4.2	3.2	3.1	3.5
Asian or Pacific Islander	14.7	8.3	1.6	53.9	65.5	65.9	64.4
Hispanic	2.5	2.3	1.8	5.2	4.6	4.2	6.0
American Indian/Alaskan Native	0.3	0.4	0.4	0.1	S	S	S
Age:							
Under 35	9.7	7.9	8.5	4.1	24.0	15.3	52.5
35 to 39	14.4	11.8	12.0	10.3	34.7	35.3	32.6
40 to 44	15.8	15.0	14.8	16.9	21.8	25.7	8.9
45 to 49	16.2	17.1	17.1	17.3	9.2	10.9	3.7
50 to 54	16.3	17.8	17.7	18.6	4.8	5.9	1.3
55 to 59	14.7	16.1	16.2	15.4	3.3	4.1	0.7
60 to 64	7.8	8.6	8.3	10.2	1.2	1.5	S
65 to 75	5.1	5.6	5.4	7.2	1.0	1.3	S
Years since doctorate:							
5 years or less	21.0	16.7	17.6	10.3	55.1	43.8	92.0
6-10 years	17.3	15.9	15.8	17.0	28.2	35.2	5.1
11-15 years	14.5	15.3	14.8	18.5	8.2	10.6	0.4
16-20 years	13.4	14.7	14.5	16.1	2.9	3.5	1.1
21-25 years	13.0	14.3	14.1	15.3	2.6	3.1	0.7
More than 25 years	20.9	23.1	23.2	22.7	3.0	3.8	0.7
Place of birth:							
U.S.	76.7	86.2	98.6	1.3	1.3	0.9	2.5
Europe	4.0	2.7	0.5	17.6	14.4	14.2	14.9
Asia	15.5	8.7	0.5	65.0	69.3	70.1	66.5
North America	1.0	0.5	0.2	3.1	4.3	4.4	4.0
Central America	0.3	0.2	0.1	1.1	1.2	1.2	1.2
Caribbean	0.4	0.3	S	2.4	1.0	1.0	0.8
South America	0.8	0.4	0.1	3.0	3.4	3.1	4.5
Africa	1.2	0.8	0.1	6.1	4.1	3.8	5.1
Oceania	0.2	S	S	0.3	1.0	1.1	0.5

[1] The race/ethnicity data shown are for all doctoral recipients, including temporary residents. 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 41. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and sector of employment: 1999

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Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
Number	553,360	240,080	15,710	185,720	30,400	27,540	37,250	14,870	1,790
	[Percent distribution]								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex:									
Male	75.9	73.5	60.1	83.8	62.5	65.2	79.5	71.0	74.1
Female	24.1	26.5	39.9	16.2	37.5	34.8	20.5	29.0	25.9
Race/ethnicity[1]:									
White	80.1	82.6	84.8	72.8	91.2	85.2	85.5	81.3	68.5
Black	2.4	3.0	5.3	1.4	1.3	2.8	2.4	4.1	5.5
Asian or Pacific Islander	14.7	10.9	6.9	23.6	5.3	9.9	9.9	11.5	14.9
Hispanic	2.5	3.1	2.3	2.1	1.8	1.9	2.0	2.5	10.5
American Indian/Alaskan Native	0.3	0.4	0.6	0.2	0.5	0.3	0.3	0.5	S
Age:									
Under 35	9.7	10.1	4.6	11.6	2.2	10.0	8.3	3.5	12.1
35 to 39	14.4	13.9	9.9	18.2	5.7	11.7	11.5	9.0	10.8
40 to 44	15.8	15.7	14.2	16.8	11.6	17.1	14.7	15.0	16.3
45 to 49	16.2	15.6	18.0	15.9	16.7	17.3	17.6	24.1	11.3
50 to 54	16.3	15.3	21.5	15.3	22.0	18.0	18.1	21.5	19.6
55 to 59	14.7	15.2	16.1	12.7	18.1	14.4	17.7	15.1	22.4
60 to 64	7.8	8.5	9.5	6.3	10.4	6.9	8.6	6.7	4.5
65 to 75	5.1	5.7	6.1	3.3	13.2	4.6	3.5	5.0	3.0
Citizenship status:									
U.S. citizen	88.8	89.8	96.0	83.3	96.7	94.0	96.5	93.0	68.7
Native	77.5	80.3	87.1	68.8	87.8	84.6	85.1	81.6	58.3
Naturalized	11.3	9.5	8.9	14.5	8.9	9.5	11.5	11.4	10.4
Non-U.S. citizen	11.2	10.2	4.0	16.7	3.3	6.0	3.5	7.0	31.3
Permanent resident	8.5	7.6	3.5	13.0	3.1	4.2	2.7	6.1	16.0
Temporary resident	2.6	2.6	0.5	3.7	0.3	1.8	0.8	0.9	15.3
Years since doctorate:									
5 years or less	21.0	21.5	20.2	22.6	9.1	22.2	19.5	18.1	23.5
6-10 years	17.3	16.9	18.2	18.8	13.2	18.6	15.1	15.5	19.3
11-15 years	14.5	14.0	17.1	14.3	14.6	15.3	14.5	21.1	9.8
16-20 years	13.4	12.1	16.6	13.8	17.6	13.9	13.7	15.6	12.4
21-25 years	13.0	12.5	12.3	12.3	16.3	12.2	16.5	15.1	15.0
More than 25 years	20.9	23.0	15.7	18.2	29.1	17.7	20.7	14.6	20.1

See explanatory information and SOURCE at end of table.

Table 41. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and sector of employment: 1999

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Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
	[Percentage distribution]								
Primary or secondary work activities:									
R&D[2]	63.7	71.0	15.7	65.9	27.2	49.8	74.8	41.5	67.2
Applied research	35.1	32.3	6.1	40.4	16.5	33.7	56.8	29.3	52.5
Basic research	25.4	44.8	6.0	6.9	4.1	16.9	31.3	9.3	13.8
Development	12.7	2.3	3.0	29.5	8.7	8.2	9.2	6.8	14.1
Design	6.7	1.5	1.5	14.6	5.0	5.0	6.5	5.7	S
Teaching	32.4	65.0	72.9	2.3	9.9	8.3	3.5	4.2	3.3
Management, sales, and administration	37.5	25.4	30.5	48.0	44.3	51.6	42.1	57.7	53.1
Computer applications	12.6	6.6	8.9	20.8	7.7	12.1	16.2	12.4	8.3
Professional services	16.4	8.6	22.0	14.6	65.5	33.3	11.8	39.6	18.1
Other activities	4.3	2.8	7.4	4.3	7.9	5.8	6.4	8.4	11.1

[1] The race/ethnicity data shown are for all doctoral recipients, including temporary residents. 'Other' race included with 'white'.

[2] R&D includes basic or applied research, development and design.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTES: Details on work activities exceed total due to multiple responses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 42. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, race/ethnicity, and sex: 1999

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Characteristics	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number	553,360	419,870	133,490	443,120	335,360	107,760	13,300	8,530	4,770
	[Percent distribution]								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age:									
Under 35	9.7	8.6	13.3	8.4	7.4	11.8	9.2	7.2	12.9
35 to 39	14.4	13.7	16.5	12.3	11.7	14.3	12.7	11.9	14.1
40 to 44	15.8	15.0	18.2	14.8	13.9	17.8	19.3	20.7	16.7
45 to 49	16.2	15.6	18.4	16.9	16.0	19.5	17.5	15.2	21.5
50 to 54	16.3	16.3	16.5	17.5	17.4	17.8	16.7	16.3	17.4
55 to 59	14.7	16.1	10.2	16.1	17.7	11.1	14.2	16.1	10.7
60 to 64	7.8	8.9	4.2	8.4	9.6	4.6	4.7	5.5	3.1
65 to 75	5.1	5.8	2.8	5.6	6.4	3.0	5.9	7.1	3.6
Years since doctorate:									
5 years or less	21.0	18.2	29.6	17.6	14.7	26.7	27.8	25.0	32.9
6-10 years	17.3	15.5	22.8	15.8	13.8	21.9	20.2	18.2	23.6
11-15 years	14.5	13.6	17.2	14.8	13.6	18.3	17.5	17.6	17.2
16-20 years	13.4	13.4	13.6	14.4	14.2	14.8	12.0	11.9	12.1
21-25 years	13.0	14.2	9.0	14.0	15.3	9.9	13.1	15.1	9.5
More than 25 years	20.9	25.1	7.7	23.5	28.3	8.5	9.5	12.1	4.7
Citizenship status:									
U.S. citizen	88.8	88.3	90.4	96.3	96.2	96.7	85.2	79.8	95.0
Native	77.5	76.1	82.1	91.1	90.6	92.8	65.6	53.8	86.8
Naturalized	11.3	12.2	8.4	5.2	5.6	3.9	19.6	26.0	8.1
Non-U.S. citizen	11.2	11.7	9.6	3.7	3.8	3.3	14.8	20.2	5.0
Permanent resident	8.5	8.9	7.4	2.9	2.9	2.6	10.9	14.9	3.8
Temporary resident	2.6	2.8	2.1	0.9	0.9	0.8	3.8	5.3	1.2
Employer location:									
New England	8.3	8.1	9.0	8.5	8.2	9.2	6.0	5.8	6.2
Middle Atlantic	16.2	15.8	17.5	16.0	15.5	17.6	15.6	16.3	14.4
East North Central	13.8	13.8	13.7	13.8	13.8	14.0	13.9	13.6	14.5
West North Central	6.1	6.1	5.9	6.4	6.5	6.3	4.5	5.7	2.4
South Atlantic	18.9	18.6	19.8	19.3	19.1	19.8	31.1	30.1	32.9
East South Central	3.8	4.0	3.2	4.0	4.2	3.4	6.0	6.2	5.6
West South Central	7.9	8.3	6.5	7.6	8.0	6.3	7.9	7.7	8.1
Mountain	6.5	6.8	5.6	7.1	7.5	6.0	2.3	2.9	1.4
Pacific	18.2	18.2	18.3	17.1	17.1	17.3	12.6	11.5	14.5
U.S. territories and other areas	0.3	0.3	0.4	0.1	0.1	0.1	S	S	S

See explanatory information and SOURCE at end of table.

Table 42. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, race/ethnicity, and sex: 1999

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Characteristics	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Percent distribution]								
Sector of employment:									
Universities and 4-year colleges	43.4	42.0	47.7	44.8	43.7	48.0	54.1	53.5	55.0
Other educational institutions	2.8	2.2	4.7	3.0	2.4	4.9	6.3	5.9	7.0
Private-for-profit	33.6	37.0	22.6	30.5	33.8	20.4	19.0	22.9	11.9
Self-employed	5.5	4.5	8.6	6.3	5.1	9.9	2.9	2.3	4.0
Private not-for-profit	5.0	4.3	7.2	5.3	4.5	7.8	5.7	5.0	7.1
Federal Government	6.7	7.1	5.7	7.2	7.6	5.8	6.7	6.4	7.1
State and local government	2.7	2.5	3.2	2.7	2.6	3.1	4.6	3.3	6.9
Other sector	0.3	0.3	0.3	0.3	0.3	0.3	0.7	0.6	S
Primary or secondary work activities:									
R&D[2]	63.7	66.2	55.7	61.7	64.4	53.1	54.5	59.2	46.1
Applied research	35.1	36.3	31.4	33.9	35.4	29.5	32.5	34.1	29.7
Basic research	25.4	25.5	25.1	25.0	25.4	24.0	23.1	27.1	16.0
Development	12.7	14.2	8.1	11.1	12.4	7.1	8.2	9.0	6.6
Design	6.7	7.8	3.2	6.1	7.2	2.9	3.6	4.4	2.1
Teaching	32.4	31.2	35.9	34.0	32.9	37.4	44.4	44.5	44.3
Management, sales, and administration	37.5	37.7	37.1	39.0	39.2	38.6	35.1	32.0	40.7
Computer applications	12.6	14.1	7.8	10.9	12.4	6.4	9.4	11.6	5.7
Professional services	16.4	13.3	26.2	17.8	14.5	28.2	18.5	13.2	27.9
Other activities	4.3	4.0	5.1	4.4	4.1	5.5	5.1	4.6	5.9
Federal support:									
Receiving support	30.4	30.7	29.4	30.9	31.5	29.1	27.6	28.6	26.0
Not receiving support	69.6	69.3	70.6	69.1	68.5	70.9	72.4	71.4	74.0
Relationship between degree and job:									
Closely related	68.4	67.3	71.7	69.3	68.2	72.8	71.1	69.3	74.4
Somewhat related	24.0	24.8	21.6	23.3	24.0	20.8	22.6	24.0	20.1
Not related	7.6	7.8	6.8	7.4	7.8	6.3	6.3	6.7	5.6

See explanatory information and SOURCE at end of table.

Table 42. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, race/ethnicity, and sex: 1999

Characteristics	Asian or Pacific Islander			Hispanic			American Indian/Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number	81,100	64,860	16,240	14,020	9,800	4,220	1,820	1,320	500
	[Percent distribution]								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age:									
Under 35	16.3	14.9	21.9	12.2	9.5	18.5	10.1	10.6	S
35 to 39	25.2	23.9	30.4	19.3	18.1	22.1	10.3	9.7	11.9
40 to 44	20.0	19.9	20.5	19.4	18.4	21.6	11.1	10.2	13.7
45 to 49	12.9	13.5	10.6	15.1	14.7	15.8	13.9	12.9	16.8
50 to 54	10.4	11.0	8.1	12.6	12.8	12.0	21.1	18.1	28.9
55 to 59	7.6	8.3	5.0	12.5	14.9	6.8	18.1	20.4	12.1
60 to 64	5.0	5.7	2.1	5.5	7.1	1.8	10.0	11.7	S
65 to 75	2.5	2.8	1.5	3.5	4.4	1.5	5.3	6.4	S
Years since doctorate:									
5 years or less	36.7	34.5	45.5	28.3	23.5	39.5	22.8	19.4	31.6
6-10 years	24.1	23.5	26.7	23.0	19.8	30.5	16.3	13.9	22.8
11-15 years	12.1	12.4	10.7	17.3	17.7	16.3	12.8	12.2	14.5
16-20 years	9.0	9.5	7.3	9.2	9.7	7.8	12.9	14.5	S
21-25 years	8.1	8.9	4.8	8.9	11.6	2.8	18.7	19.0	18.2
More than 25 years	10.0	11.2	5.0	13.2	17.6	2.9	16.5	21.0	S
Citizenship status:									
U.S. citizen	50.1	50.4	48.9	79.7	77.5	84.9	98.4	97.7	100.0
Native	8.6	7.2	13.9	56.4	53.6	63.1	95.3	94.6	97.1
Naturalized	41.5	43.2	35.0	23.3	23.9	21.9	3.0	S	S
Non-U.S. citizen	49.9	49.6	51.1	20.3	22.5	15.1	S	S	S
Permanent resident	38.4	37.9	40.5	14.0	16.2	9.1	S	S	S
Temporary resident	11.5	11.7	10.6	6.2	6.4	5.9	S	S	S
Employer location:									
New England	8.1	7.7	9.7	6.5	7.8	3.6	4.6	4.5	S
Middle Atlantic	18.1	18.2	17.8	14.0	12.7	17.0	9.0	7.4	13.3
East North Central	14.3	14.5	13.4	10.4	11.1	8.5	13.1	14.7	S
West North Central	4.6	4.6	4.8	4.9	4.7	5.5	8.0	8.1	S
South Atlantic	14.9	14.7	15.9	18.4	17.8	19.8	12.0	12.3	11.3
East South Central	2.5	2.7	2.0	2.2	2.8	S	8.1	6.8	11.5
West South Central	8.5	8.9	6.7	11.4	12.0	9.9	17.3	20.2	S
Mountain	3.6	3.6	3.6	7.4	7.3	7.6	14.3	16.1	S
Pacific	25.2	25.0	25.9	16.8	16.2	18.3	13.5	10.0	23.0
U.S. territories and other areas	0.1	0.1	S	7.9	7.5	8.9	S	S	S

See explanatory information and SOURCE at end of table.

Table 42. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics, race/ethnicity, and sex: 1999

Characteristics	Asian or Pacific Islander			Hispanic			American Indian/Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	[Percent distribution]								
Sector of employment:									
Universities and 4-year colleges	32.4	30.2	41.2	52.8	51.0	57.2	50.4	51.0	48.8
Other educational institutions	1.3	1.1	2.3	2.6	1.5	5.2	5.3	6.5	S
Private-for-profit	54.0	57.0	41.8	27.6	31.6	18.4	20.4	21.4	17.7
Self-employed	2.0	2.0	1.9	4.0	3.4	5.4	8.1	7.1	10.7
Private not-for-profit	3.3	3.2	4.0	3.7	3.2	4.9	4.3	S	S
Federal Government	4.5	4.3	5.4	5.2	6.0	3.4	6.8	7.3	S
State and local government	2.1	1.9	3.0	2.7	2.4	3.4	4.3	S	S
Other sector	0.3	0.3	S	1.3	1.0	2.1	S	S	S
Primary or secondary work activities:									
R&D[2]	75.9	76.2	74.8	66.2	69.0	59.6	52.3	51.1	55.5
Applied research	41.8	41.4	43.3	35.9	36.2	35.1	31.0	31.0	30.9
Basic research	26.7	24.8	34.1	31.7	32.7	29.4	22.0	20.7	25.5
Development	22.9	24.7	15.4	9.1	10.3	6.5	9.2	11.2	S
Design	10.5	11.6	5.8	5.2	6.1	3.3	3.7	S	S
Teaching	20.1	19.6	22.1	38.3	37.1	41.0	36.9	38.5	32.6
Management, sales, and administration	29.8	30.4	27.3	36.5	37.4	34.5	44.6	46.6	39.4
Computer applications	22.6	23.7	18.5	10.0	11.8	5.9	6.7	7.4	S
Professional services	8.2	6.9	13.1	16.3	13.8	22.3	25.1	20.6	37.1
Other activities	3.3	3.5	2.6	3.6	3.2	4.3	4.3	5.1	S
Federal support:									
Receiving support	27.4	26.4	31.2	34.5	35.9	31.3	31.7	26.7	44.9
Not receiving support	72.6	73.6	68.8	65.5	64.1	68.7	68.3	73.3	55.1
Relationship between degree and job:									
Closely related	61.6	61.6	61.9	74.3	73.1	77.1	73.6	75.5	68.7
Somewhat related	29.7	30.1	28.1	18.0	18.6	16.8	20.5	20.4	20.7
Not related	8.7	8.3	10.0	7.7	8.4	6.1	5.9	4.1	10.7

[1] 'Other' race included with 'white'.

[2] R&D includes basic or applied research, development and design.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTE: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Details on work activities exceed total due to multiple responses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 43. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 1999

Page 1 of 2

Characteristics	Total	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Develop-ment	Design					
Number	553,360	352,430	194,220	140,520	70,480	36,990	179,030	207,720	69,590	90,900	23,550
	[Percent distribution]										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex:											
Male	75.9	78.9	78.4	76.1	84.7	88.3	73.3	76.1	85.1	61.5	71.1
Female	24.1	21.1	21.6	23.9	15.3	11.7	26.7	23.9	14.9	38.5	28.9
Race/ethnicity[1]**:**											
White	80.1	77.6	77.4	79.0	70.1	73.6	84.2	83.3	69.6	87.0	83.3
Black	2.4	2.1	2.2	2.2	1.5	1.3	3.3	2.2	1.8	2.7	2.9
Asian or Pacific Islander	14.7	17.5	17.4	15.4	26.3	23.0	9.1	11.6	26.4	7.3	11.4
Hispanic	2.5	2.6	2.6	3.2	1.8	2.0	3.0	2.5	2.0	2.5	2.1
American Indian/Alaskan Native	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.4	0.2	0.5	0.3
Age:											
Under 35	9.7	12.2	12.4	14.5	13.1	12.5	7.2	6.0	15.4	6.3	5.8
35 to 39	14.4	17.2	17.2	18.4	18.4	18.5	12.4	11.3	18.2	10.2	11.1
40 to 44	15.8	17.1	17.5	17.7	16.4	15.0	15.2	15.3	17.0	14.5	12.3
45 to 49	16.2	15.9	16.2	14.7	14.8	15.3	16.2	17.7	14.3	19.1	17.5
50 to 54	16.3	14.4	14.3	12.8	14.5	14.7	15.7	19.8	14.2	20.2	15.1
55 to 59	14.7	12.2	11.6	11.1	11.7	13.9	16.8	17.8	12.4	15.2	17.9
60 to 64	7.8	6.7	6.5	6.3	6.6	7.2	9.8	8.1	5.6	7.9	11.5
65 to 75	5.1	4.3	4.2	4.4	4.4	2.9	6.7	3.9	3.0	6.7	8.8
Years since doctorate:											
5 years or less	21.0	24.3	25.8	26.3	25.8	27.0	17.3	13.8	31.6	17.4	17.0
6-10 years	17.3	18.6	18.8	18.4	18.2	18.1	17.0	16.4	18.6	17.3	15.0
11-15 years	14.5	14.5	14.4	14.4	14.1	12.4	14.6	15.7	11.9	15.7	14.4
16-20 years	13.4	12.5	12.7	11.7	11.6	11.2	13.1	15.7	10.8	16.7	13.6
21-25 years	13.0	11.4	10.9	10.5	11.5	12.6	12.7	16.0	11.2	14.1	13.2
More than 25 years	20.9	18.7	17.3	18.6	18.7	18.8	25.3	22.5	15.9	18.8	26.9

See explanatory information and SOURCE at end of table.

Table 43. Employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 1999

Page 2 of 2

Characteristics	Total	Research and development					Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
		Total	Applied research	Basic research	Development	Design					
	[Percentage distribution]										
Citizenship status:											
U.S. citizen	88.8	85.9	85.8	85.9	82.0	83.3	92.0	92.9	78.5	95.4	92.8
Native	77.5	73.9	74.0	75.2	66.1	68.3	82.1	82.1	64.9	86.9	81.2
Naturalized	11.3	12.0	11.9	10.7	16.0	15.0	10.0	10.8	13.6	8.6	11.6
Non-U.S. citizen	11.2	14.1	14.2	14.1	18.0	16.7	8.0	7.1	21.5	4.6	7.2
Permanent resident	8.5	10.5	10.1	10.1	14.0	12.5	6.6	6.1	15.2	4.0	5.9
Temporary resident	2.6	3.6	4.0	4.0	4.0	4.2	1.4	1.0	6.4	0.6	1.3
Sector of employment:											
Universities and 4-year colleges	43.4	48.4	39.9	76.6	7.9	9.4	87.1	29.4	22.9	22.7	28.3
Other educational institutions	2.8	0.7	0.5	0.7	0.7	0.6	6.4	2.3	2.0	3.8	4.9
Private-for-profit	33.6	34.7	38.6	9.1	77.8	73.2	2.4	42.9	55.5	29.9	33.6
Self-employed	5.5	2.3	2.6	0.9	3.8	4.1	1.7	6.5	3.4	21.9	10.2
Private not-for-profit	5.0	3.9	4.8	3.3	3.2	3.7	1.3	6.8	4.8	10.1	6.8
Federal Government	6.7	7.9	10.9	8.3	4.9	6.5	0.7	7.5	8.7	4.8	10.1
State and local government	2.7	1.7	2.2	1.0	1.4	2.3	0.3	4.1	2.6	6.5	5.3
Other sector	0.3	0.3	0.5	0.2	0.4	S	S	0.5	0.2	0.4	0.8
Employer location:											
New England	8.3	8.9	8.5	9.7	7.9	7.6	8.8	7.6	8.5	7.5	6.3
Middle Atlantic	16.2	15.9	15.7	16.0	17.1	15.6	16.1	16.4	15.2	17.9	14.4
East North Central	13.8	14.1	13.7	14.5	14.6	12.5	16.2	13.1	11.9	12.1	13.2
West North Central	6.1	5.9	5.7	6.4	6.0	4.5	8.0	5.6	4.3	6.5	5.8
South Atlantic	18.9	18.9	20.4	19.1	15.3	15.8	17.3	19.9	17.9	19.2	23.9
East South Central	3.8	3.6	3.9	4.1	2.3	2.5	5.3	3.5	3.3	3.5	3.3
West South Central	7.9	7.7	7.3	7.4	8.0	8.9	8.6	7.8	8.1	8.1	7.7
Mountain	6.5	6.7	7.0	6.3	6.0	7.9	6.3	6.4	7.1	5.7	7.9
Pacific	18.2	18.1	17.7	16.1	22.8	24.6	13.0	19.2	23.5	19.1	17.1
U.S. territories and other areas	0.3	0.3	0.2	0.4	0.1	S	0.4	0.4	0.2	0.4	0.4

[1] The race/ethnicity data shown are for all doctoral recipients, including temporary residents. 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTE: Details on work activities exceed total due to multiple responses. Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 44. Employed doctoral scientists and engineers, by field of doctorate and broad occupation: 1999

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Field of doctorate	Total	S&E occupations															Non-S&E occupations				
		All S&E occupations	Computer and information scientists		Mathematical scientists		Life and related scientists		Physical and related scientists		Social and related scientists		Psychologists		Engineers		All non-S&E occupations	Top/mid managers, admin.	Health and related	Teachers, except S&E postsec.	Other
			Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher					
		[Percentage distribution]																			
All fields	553,360	100.0	4.8	1.1	1.2	2.4	12.3	6.5	8.9	4.7	2.5	5.7	8.8	3.0	10.4	3.1	24.7	11.9	3.1	4.3	5.3
Sciences	457,470	100.0	4.1	1.1	1.3	2.8	14.7	7.8	10.3	5.6	3.0	6.9	10.6	3.6	1.9	0.3	26.0	11.8	3.6	4.9	5.6
Computer/information sciences	9,600	100.0	49.9	29.0	0.5	0.5	0.2	0.2	0.1	S	0.2	0.2	S	S	3.1	0.4	15.5	8.7	0.1	2.2	4.6
Mathematical sciences	25,300	100.0	15.2	4.9	12.5	46.1	0.5	0.2	0.6	0.4	S	0.4	0.2	0.1	1.7	0.9	16.5	9.4	0.4	1.9	4.8
Biological and agricultural sciences	134,360	100.0	1.5	0.1	0.6	0.3	43.0	23.5	1.6	1.8	0.1	0.2	S	0.1	0.7	0.1	26.3	10.5	7.3	2.9	5.6
Agricultural/ food sciences	16,560	100.0	1.8	0.5	S	S	47.3	21.7	2.7	1.6	S	0.6	S	S	0.7	S	23.1	11.4	1.2	2.6	7.9
Biological sciences	112,840	100.0	1.5	S	0.7	0.3	42.8	24.2	1.2	1.6	S	0.1	S	0.1	0.5	0.1	26.7	10.1	8.5	2.9	5.2
Environmental life sciences	4,970	100.0	1.6	0.5	1.0	S	33.4	13.9	9.0	5.5	2.2	1.2	S	S	4.6	1.0	26.1	16.5	1.3	2.6	5.7
Health sciences	19,310	100.0	0.4	S	1.0	S	14.8	6.9	2.2	S	1.6	0.9	0.8	0.5	0.3	S	70.6	15.4	18.9	33.0	3.2
Physical and related sciences	110,300	100.0	5.2	0.4	0.2	0.3	4.3	1.1	39.8	20.4	0.2	S	S	S	6.0	0.9	21.1	12.2	1.2	1.5	6.1
Chemistry except biochemistry	55,810	100.0	2.4	0.3	S	S	6.8	1.0	42.1	18.7	0.1	S	S	S	3.9	0.4	24.3	15.1	1.7	1.6	5.9
Earth/atmos/ocean sciences	15,940	100.0	3.3	0.1	S	0.2	3.1	1.5	46.2	27.2	S	S	S	S	2.8	0.8	14.7	8.0	0.4	1.9	4.4
Physics and astronomy	38,560	100.0	10.0	0.7	0.7	0.7	1.3	1.1	33.8	19.9	0.4	0.1	S	0.1	10.6	1.5	19.2	9.8	0.9	1.3	7.2
Social sciences	74,300	100.0	1.5	0.6	1.2	0.6	0.5	0.7	0.3	0.9	16.6	41.3	0.8	0.5	0.3	S	34.2	15.9	1.1	9.6	7.6
Economics	21,190	100.0	1.3	0.6	0.9	0.2	0.2	1.5	0.1	0.1	28.7	41.4	0.1	S	0.1	S	24.6	15.1	0.4	5.3	3.8
Political and related sciences	16,090	100.0	1.0	0.5	0.8	S	S	0.1	S	S	10.5	51.9	0.3	0.2	0.3	S	34.3	19.2	1.0	5.6	8.6
Sociology	13,420	100.0	0.9	0.3	1.2	0.4	0.2	S	S	0.1	14.1	50.2	0.9	0.5	0.2	0.2	30.9	15.6	1.4	7.4	6.5
Other social sciences	23,590	100.0	2.2	0.9	1.8	1.4	1.3	0.9	0.8	2.6	11.2	29.1	1.8	1.0	0.4	S	44.6	14.7	1.7	17.4	10.8
Psychology	84,300	100.0	1.5	0.1	0.5	S	1.3	1.0	S	S	0.8	0.4	56.6	18.6	0.4	S	18.8	10.2	1.0	3.3	4.3

See explanatory information and SOURCE at end of table.

Table 44. Employed doctoral scientists and engineers, by field of doctorate and broad occupation: 1999

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Field of doctorate	Total	S&E occupations															Non-S&E occupations				
		All S&E occupations	Computer and information scientists		Mathematical scientists		Life and related scientists		Physical and related scientists		Social and related scientists		Psychologists		Engineers		All non-S&E occupations	Top/mid managers, admin.	Health and related	Teachers, except S&E postsec.	Other
			Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher	Non-teacher	Postsec. teacher					
		[Percentage distribution]																			
Engineering	95,890	100.0	8.1	1.1	0.6	0.4	0.9	0.6	2.4	0.4	0.1	S	S	S	50.7	16.3	18.2	12.4	0.7	1.2	4.0
Aerospace/aeronautical engineering	4,360	100.0	6.0	S	S	0.2	0.2	0.1	1.4	0.9	S	S	S	S	52.4	22.0	16.7	11.9	0.6	S	4.2
Chemical engineering	12,520	100.0	4.7	0.2	0.3	0.1	1.3	0.6	2.4	0.1	S	S	S	S	60.2	11.5	18.5	13.5	0.9	0.9	3.2
Civil engineering	8,700	100.0	2.6	0.5	0.5	0.2	0.1	S	1.7	0.3	S	0.1	S	S	52.7	29.2	12.3	8.6	0.2	0.6	2.9
Electrical/computer engineering	25,980	100.0	14.2	2.3	0.3	0.1	0.2	0.1	2.0	0.3	0.2	S	S	S	45.2	15.4	19.7	14.6	0.6	0.5	4.1
Materials/metallurgical engineering	9,970	100.0	3.1	0.4	0.2	0.2	0.5	0.3	5.1	0.9	S	S	0.2	S	60.6	8.6	19.9	14.9	S	0.7	4.4
Mechanical engineering	12,780	100.0	7.0	0.4	S	0.2	0.4	0.3	0.7	0.3	S	S	S	S	57.7	17.6	15.4	10.2	0.6	0.2	4.4
Other engineering	21,580	100.0	8.2	1.2	1.8	1.4	2.5	1.7	3.3	0.7	0.3	0.2	0.1	S	42.1	16.7	19.9	10.9	1.3	3.4	4.3

KEY: S=Suppressed due to too few cases (fewer than 50 weighted cases).

NOTE Numbers are rounded to nearest ten. Details may not add to total because of rounding.

SOURCE National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 45. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1999

Page 1 of 2

Field of doctorate	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All fields	$70,000	$75,000	$57,000	$70,000	$75,000	$57,600	$60,000	$63,000	$55,000
Sciences	66,600	70,000	56,000	68,000	72,000	56,100	59,000	60,000	55,000
Computer and information sciences	80,500	84,000	69,700	81,000	85,000	68,000	S	S	S
Mathematical sciences	67,000	69,000	58,000	69,000	70,000	58,000	63,000	65,000	S
Biological and agricultural sciences	64,000	67,700	55,000	66,000	70,000	56,000	55,000	58,000	53,000
Agricultural/food sciences	64,000	65,000	55,000	65,000	68,000	55,900	47,000	45,000	S
Biological sciences	64,000	69,000	55,000	67,000	70,000	56,000	56,000	60,000	50,000
Environmental life sciences	61,000	63,000	52,000	62,300	64,000	53,000	S	S	S
Health sciences	65,000	73,000	60,000	64,600	75,000	59,000	60,000	60,000	64,000
Physical and related sciences	75,000	77,000	64,000	77,000	78,700	63,000	67,000	70,000	63,000
Chemistry except biochemistry	75,000	78,000	67,000	78,000	80,000	68,000	70,000	70,000	S
Earth/atmos/ocean sciences	63,800	66,000	50,000	65,000	68,000	50,000	S	S	S
Physics and astronomy	79,900	80,000	67,000	80,000	80,000	64,000	70,000	70,000	S
Social sciences	62,000	67,000	53,900	63,000	68,000	54,000	59,000	58,000	60,000
Economics	75,000	76,000	67,200	78,000	80,000	70,000	60,000	60,000	S
Political and related sciences	62,000	65,000	55,000	63,000	65,000	56,000	69,000	69,000	68,000
Sociology	56,000	59,000	52,500	57,000	60,000	53,000	56,500	54,000	58,000
Other social sciences	56,000	60,000	51,000	56,000	60,000	51,000	52,000	43,900	60,000
Psychology	60,000	66,000	55,000	62,000	66,500	55,700	55,000	60,200	52,000
Engineering	82,000	84,000	70,000	85,000	85,000	70,000	72,000	72,000	S
Aerospace/aeronautical engineering	81,000	81,200	S	82,000	82,000	S	S	S	S
Chemical engineering	84,000	85,000	73,000	86,000	88,600	72,000	S	S	S
Civil engineering	76,000	77,600	58,000	78,000	80,000	58,000	S	S	S
Electrical/computer engineering	90,000	90,000	75,000	92,000	93,000	73,000	72,000	72,000	S
Materials/metallurgical engineering	80,000	82,000	73,200	83,000	85,000	73,000	S	S	S
Mechanical engineering	76,500	76,500	66,000	80,000	80,000	S	75,000	75,000	S
Other engineering	80,000	80,000	68,000	82,000	85,000	68,000	78,000	79,000	S

See explanatory information and SOURCE at end of table.

Table 45. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1999

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Field of doctorate	Asian or Pacific Islander			Hispanic			American Indian/Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All fields	$70,000	$73,000	$58,000	$62,400	$70,000	$50,000	$61,000	$61,000	$54,400
Sciences	63,000	66,000	56,000	60,000	67,500	49,000	58,800	60,000	54,000
Computer and information sciences	80,000	82,000	80,000	90,000	S	S	S	S	S
Mathematical sciences	65,000	65,000	63,000	57,400	65,000	S	S	S	S
Biological and agricultural sciences	52,000	55,000	47,500	60,000	65,800	45,000	61,000	62,000	S
Agricultural/food sciences	52,000	52,000	45,000	65,800	66,800	S	S	S	S
Biological sciences	51,000	55,000	47,500	60,000	63,000	48,000	62,000	65,000	S
Environmental life sciences	59,000	59,000	S	S	S	S	S	S	S
Health sciences	73,000	70,000	74,500	61,000	S	58,500	S	S	S
Physical and related sciences	70,000	73,000	67,000	72,000	76,000	52,000	76,800	78,000	S
Chemistry except biochemistry	70,000	72,800	67,500	72,000	76,000	52,000	S	S	S
Earth/atmos/ocean sciences	56,700	58,000	50,000	62,000	70,000	S	S	S	S
Physics and astronomy	76,000	76,000	74,900	80,000	80,100	S	S	S	S
Social sciences	60,000	60,000	52,000	55,000	59,700	49,000	53,000	53,000	S
Economics	67,000	69,000	62,000	75,000	72,000	S	S	S	S
Political and related sciences	52,000	60,000	48,500	53,000	53,000	S	S	S	S
Sociology	48,000	53,000	44,000	50,000	55,000	S	S	S	S
Other social sciences	58,000	58,000	51,000	56,000	59,700	49,000	S	S	S
Psychology	51,000	60,000	48,500	52,000	65,000	48,000	54,000	49,000	S
Engineering	80,000	80,000	70,000	72,000	72,000	S	S	S	S
Aerospace/aeronautical engineering	78,000	78,000	S	S	S	S	S	S	S
Chemical engineering	80,000	80,000	S	85,000	S	S	S	S	S
Civil engineering	76,000	80,000	S	56,500	56,500	S	S	S	S
Electrical/computer engineering	86,000	86,200	79,000	78,000	84,000	S	S	S	S
Materials/metallurgical engineering	77,000	77,000	82,000	78,000	78,000	S	S	S	S
Mechanical engineering	71,000	72,000	S	71,000	71,000	S	S	S	S
Other engineering	75,000	75,000	70,000	70,000	72,000	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 46. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and citizenship status: 1999

Field of doctorate	Total	U.S. citizen			Non-U.S. citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
All fields	$70,000	$71,000	$70,000	$78,000	$63,000	$66,000	$55,000
Sciences	66,600	68,000	67,200	72,000	58,000	60,000	43,000
Computer and information sciences	80,500	80,500	80,000	85,300	80,500	85,000	75,100
Mathematical sciences	67,000	70,000	70,000	69,600	55,000	58,700	46,100
Biological and agricultural sciences	64,000	65,000	65,000	67,500	43,500	49,000	32,000
Agricultural/food sciences	64,000	65,000	66,000	58,000	44,500	46,000	37,700
Biological sciences	64,000	66,000	65,500	70,000	42,000	49,000	31,500
Environmental life sciences	61,000	61,000	61,000	65,000	59,000	59,000	S
Health sciences	65,000	65,000	64,000	80,400	60,000	65,000	42,000
Physical and related sciences	75,000	77,600	77,000	80,000	63,000	67,000	45,000
Chemistry except biochemistry	75,000	78,000	78,000	80,000	64,000	67,500	37,000
Earth/atmos/ocean sciences	63,800	65,000	65,000	66,000	54,000	53,000	60,000
Physics and astronomy	79,900	80,000	80,000	81,000	67,000	75,000	52,000
Social sciences	62,000	62,800	62,000	65,000	59,000	60,000	57,000
Economics	75,000	75,000	76,000	73,900	70,000	75,000	59,000
Political and related sciences	62,000	63,000	64,500	60,000	50,000	50,000	S
Sociology	56,000	57,000	57,000	58,000	48,000	48,000	S
Other social sciences	56,000	56,000	55,000	65,000	52,000	53,000	46,000
Psychology	60,000	60,000	60,000	60,000	55,000	60,000	43,200
Engineering	82,000	85,000	85,000	88,100	72,000	75,000	65,000
Aerospace/aeronautical engineering	81,000	83,500	83,000	85,000	71,600	71,600	72,000
Chemical engineering	84,000	87,000	85,000	90,000	70,000	75,000	64,500
Civil engineering	76,000	80,000	76,000	87,500	64,000	69,000	55,000
Electrical/computer engineering	90,000	93,000	93,000	93,000	81,000	85,000	75,000
Materials/metallurgical engineering	80,000	85,000	84,400	85,000	72,000	75,000	60,000
Mechanical engineering	76,500	80,000	80,000	85,000	67,000	70,000	60,000
Other engineering	80,000	83,000	83,000	84,000	68,900	70,000	62,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 47. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and age: 1999

Field of doctorate	Total	Under 35	35-39	40-44	45-49	50-54	55-59	60-64	65-75
All fields	$70,000	$50,700	$61,000	$67,000	$72,000	$78,000	$80,000	$82,000	$78,000
Sciences	66,600	43,500	56,000	63,000	68,800	75,000	77,500	78,000	75,000
Computer and information sciences	80,500	80,000	84,000	84,000	80,000	85,200	78,000	S	S
Mathematical sciences	67,000	46,000	52,000	58,000	68,000	75,000	82,000	75,000	80,000
Biological and agricultural sciences	64,000	34,000	50,000	61,000	70,000	75,400	78,000	82,000	80,000
Agricultural/food sciences	64,000	52,000	56,000	60,000	62,000	72,000	74,000	74,600	70,000
Biological sciences	64,000	33,000	49,200	62,000	72,000	78,000	80,000	86,000	81,200
Environmental life sciences	61,000	36,000	50,000	55,000	64,000	71,000	78,000	S	S
Health sciences	65,000	46,700	60,000	58,000	65,000	69,000	70,000	69,700	70,000
Physical and related sciences	75,000	52,000	65,000	74,000	81,000	88,000	89,200	85,000	80,000
Chemistry except biochemistry	75,000	53,500	69,000	75,000	88,500	90,000	87,000	79,000	70,000
Earth/atmos/ocean sciences	63,800	42,000	53,000	56,000	62,000	82,000	83,400	78,000	83,400
Physics and astronomy	79,900	52,000	64,000	75,000	80,000	90,000	90,800	90,000	82,500
Social sciences	62,000	48,000	50,000	58,000	60,000	68,000	71,000	70,000	74,000
Economics	75,000	60,000	62,000	80,000	70,000	79,000	89,100	81,500	80,000
Political and related sciences	62,000	42,000	45,000	54,000	62,000	70,000	77,000	80,000	80,000
Sociology	56,000	42,000	46,000	48,000	55,000	60,000	65,000	65,000	65,000
Other social sciences	56,000	41,500	43,000	50,000	53,300	62,000	62,500	58,500	70,000
Psychology	60,000	43,000	50,000	55,000	65,000	69,300	68,000	71,000	60,500
Engineering	82,000	70,000	75,000	79,400	89,200	95,000	97,000	95,000	91,000
Aerospace/aeronautical engineering	81,000	65,000	71,600	79,000	95,000	83,000	99,100	88,000	100,000
Chemical engineering	84,000	68,000	80,000	85,000	90,000	100,000	90,000	87,000	124,000
Civil engineering	76,000	55,200	68,600	69,000	80,000	89,000	92,000	95,300	80,000
Electrical/computer engineering	90,000	80,000	83,000	85,000	91,000	101,000	106,000	100,000	96,000
Materials/metallurgical engineering	80,000	68,000	75,000	75,000	90,500	100,000	100,000	96,000	S
Mechanical engineering	76,500	65,000	70,000	72,000	82,000	88,100	99,000	95,000	110,000
Other engineering	80,000	64,000	70,000	73,000	85,000	90,000	92,000	91,000	60,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 48. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and years since doctorate: 1999

Field of doctorate	Total	5 years or less	6-10 years	11-15 years	16-20 years	21-25 years	More than 25 years
All fields	$70,000	$51,000	$63,000	$70,000	$78,800	$82,800	$87,000
Sciences	66,600	45,000	59,500	67,000	75,000	80,000	84,000
Computer and information sciences	80,500	74,000	84,000	95,000	100,000	S	S
Mathematical sciences	67,000	48,000	53,000	60,000	70,000	79,500	82,000
Biological and agricultural sciences	64,000	36,000	56,000	67,000	78,000	80,000	84,000
Agricultural/food sciences	64,000	45,000	58,000	69,000	70,000	75,000	75,000
Biological sciences	64,000	35,000	56,000	68,500	80,000	81,000	85,000
Environmental life sciences	61,000	47,000	54,000	60,100	75,000	75,400	80,000
Health sciences	65,000	52,000	62,000	70,000	75,000	85,000	90,000
Physical and related sciences	75,000	54,000	66,200	75,000	85,200	89,000	90,000
Chemistry except biochemistry	75,000	56,000	70,000	77,000	89,000	90,000	87,200
Earth/atmos/ocean sciences	63,800	45,000	54,900	62,000	75,000	82,000	88,000
Physics and astronomy	79,900	55,000	68,000	75,000	90,000	89,600	91,200
Social sciences	62,000	46,600	53,000	60,000	68,000	75,000	80,000
Economics	75,000	60,000	61,900	75,000	75,000	90,000	90,000
Political and related sciences	62,000	45,000	52,400	54,600	70,000	90,000	78,800
Sociology	56,000	42,100	47,000	53,000	64,000	65,000	72,000
Other social sciences	56,000	43,000	50,000	56,000	62,000	65,000	71,000
Psychology	60,000	45,000	55,000	63,000	70,000	72,000	75,000
Engineering	82,000	69,300	78,000	85,000	91,000	96,000	100,000
Aerospace/aeronautical engineering	81,000	65,000	72,000	89,400	78,000	96,000	95,000
Chemical engineering	84,000	68,000	81,000	86,000	92,000	100,000	95,000
Civil engineering	76,000	56,400	72,000	80,000	84,000	90,000	95,000
Electrical/computer engineering	90,000	78,000	85,000	92,000	100,000	102,000	103,000
Materials/metallurgical engineering	80,000	68,000	77,000	85,000	100,000	90,000	110,000
Mechanical engineering	76,500	65,000	71,000	80,000	90,000	98,000	100,000
Other engineering	80,000	64,000	75,000	84,300	90,000	90,900	95,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 49. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and sector of employment: 1999

Field of doctorate	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
All fields	$70,000	$60,000	$49,500	$85,000	$75,000	$70,000	$76,000	$57,000	$100,000
Sciences	66,600	58,000	50,000	84,000	70,000	66,500	75,000	57,000	106,000
Computer and information sciences	80,500	63,000	S	95,000	S	95,000	86,400	S	S
Mathematical sciences	67,000	59,000	50,400	88,000	100,000	85,000	76,000	S	S
Biological and agricultural sciences	64,000	57,000	45,000	80,100	50,000	65,000	70,000	54,000	S
Agricultural/food sciences	64,000	58,000	44,000	74,600	45,000	70,000	66,400	45,000	S
Biological sciences	64,000	56,000	45,000	85,000	50,000	65,000	70,000	58,200	S
Environmental life sciences	61,000	57,000	S	75,000	S	66,000	68,100	51,000	S
Health sciences	65,000	59,500	56,400	88,200	60,000	72,000	73,000	60,000	S
Physical and related sciences	75,000	58,000	45,000	85,000	70,000	78,000	82,000	57,100	70,000
Chemistry except biochemistry	75,000	54,000	46,000	85,000	75,000	74,900	75,700	47,000	S
Earth/atmos/ocean sciences	63,800	54,000	48,000	75,000	50,000	63,000	84,000	58,000	S
Physics and astronomy	79,900	65,000	40,000	85,000	56,000	82,000	86,000	90,000	S
Social sciences	62,000	59,000	46,000	90,000	60,000	72,000	80,000	56,500	110,000
Economics	75,000	69,300	46,000	100,000	75,000	76,900	84,700	64,000	115,000
Political and related sciences	62,000	58,300	57,300	100,000	70,000	78,000	89,000	61,000	S
Sociology	56,000	55,000	52,500	66,300	34,000	73,000	82,000	55,000	S
Other social sciences	56,000	53,000	42,900	80,000	55,000	57,000	65,000	53,000	S
Psychology	60,000	55,000	55,000	75,000	75,000	57,000	70,200	57,000	S
Engineering	82,000	74,400	39,300	86,000	100,000	85,000	82,600	57,000	S
Aerospace/aeronautical engineering	81,000	81,200	S	80,000	100,000	S	74,300	S	S
Chemical engineering	84,000	76,500	S	85,000	S	95,000	83,000	S	S
Civil engineering	76,000	70,000	S	90,000	S	85,000	89,000	55,100	S
Electrical/computer engineering	90,000	78,000	S	92,000	100,000	87,000	80,000	S	S
Materials/metallurgical engineering	80,000	66,200	S	84,000	50,000	78,500	77,000	S	S
Mechanical engineering	76,500	73,000	S	80,000	90,000	80,000	75,000	S	S
Other engineering	80,000	72,000	S	85,000	70,000	80,000	87,400	57,000	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 50. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 1999

Page 1 of 2

Employment sector/field of doctorate	Total	Male	Female
All sectors	$70,000	$75,000	$57,000
Sciences	66,600	70,000	56,000
Computer and information sciences	80,500	84,000	69,700
Mathematical sciences	67,000	69,000	58,000
Biological and agricultural sciences	64,000	67,700	55,000
Health sciences	65,000	73,000	60,000
Physical and related sciences	75,000	77,000	64,000
Social sciences	62,000	67,000	53,900
Psychology	60,000	66,000	55,000
Engineering	82,000	84,000	70,000
Universities and 4-year colleges	60,000	63,000	50,000
Sciences	58,000	60,000	50,000
Computer and information sciences	63,000	65,000	60,000
Mathematical sciences	59,000	60,000	48,400
Biological and agricultural sciences	57,000	60,000	47,700
Health sciences	59,500	62,000	55,500
Physical and related sciences	58,000	60,000	47,000
Social sciences	59,000	62,000	51,000
Psychology	55,000	60,000	50,000
Engineering	74,400	75,000	59,500
Other educational institutions	49,500	50,000	45,000
Sciences	50,000	50,000	45,500
Computer and information sciences	S	S	S
Mathematical sciences	50,400	50,000	S
Biological and agricultural sciences	45,000	47,000	40,500
Health sciences	56,400	S	56,400
Physical and related sciences	45,000	47,000	39,500
Social sciences	46,000	50,000	45,000
Psychology	55,000	60,000	50,000
Engineering	39,300	41,000	S
Private-for-profit	85,000	87,000	74,000
Sciences	84,000	86,600	74,000
Computer and information sciences	95,000	99,000	84,000
Mathematical sciences	88,000	89,400	84,000
Biological and agricultural sciences	80,100	84,200	70,000
Health sciences	88,200	95,000	80,000
Physical and related sciences	85,000	85,300	77,000
Social sciences	90,000	96,000	64,000
Psychology	75,000	82,300	67,500
Engineering	86,000	87,300	75,000
Self-employed	75,000	80,000	60,000
Sciences	70,000	75,000	60,000
Computer and information sciences	S	S	S
Mathematical sciences	100,000	100,000	S
Biological and agricultural sciences	50,000	50,000	28,000
Health sciences	60,000	67,000	43,000
Physical and related sciences	70,000	75,000	S
Social sciences	60,000	70,000	49,000
Psychology	75,000	80,000	70,000
Engineering	100,000	100,000	S

See explanatory information and SOURCE at end of table.

Table 50. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and sex: 1999

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Employment sector/field of doctorate	Total	Male	Female
Private not-for-profit	$70,000	$73,000	$60,000
Sciences	66,500	71,000	60,000
Computer and information sciences	95,000	S	S
Mathematical sciences	85,000	85,000	S
Biological and agricultural sciences	65,000	67,000	63,000
Health sciences	72,000	76,000	66,000
Physical and related sciences	78,000	80,000	67,000
Social sciences	72,000	72,000	70,900
Psychology	57,000	62,000	54,000
Engineering	85,000	85,000	S
Federal Government	76,000	79,000	68,100
Sciences	75,000	78,000	68,000
Computer and information sciences	86,400	86,400	S
Mathematical sciences	76,000	77,000	S
Biological and agricultural sciences	70,000	73,000	65,000
Health sciences	73,000	80,800	68,000
Physical and related sciences	82,000	84,000	72,000
Social sciences	80,000	82,000	75,000
Psychology	70,200	72,000	66,400
Engineering	82,600	83,800	71,900
State and local government	57,000	59,000	55,000
Sciences	57,000	59,000	55,000
Computer and information sciences	S	S	S
Mathematical sciences	S	S	S
Biological and agricultural sciences	54,000	55,000	49,000
Health sciences	60,000	S	65,000
Physical and related sciences	57,100	56,000	S
Social sciences	56,500	59,000	53,300
Psychology	57,000	59,000	56,000
Engineering	57,000	57,000	S
Other sector	100,000	110,000	100,000
Sciences	106,000	110,000	90,000
Computer and information sciences	S	S	S
Mathematical sciences	S	S	S
Biological and agricultural sciences	S	S	S
Health sciences	S	S	S
Physical and related sciences	70,000	70,000	S
Social sciences	110,000	115,000	110,000
Psychology	S	S	S
Engineering	S	S	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 51. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and race/ethnicity: 1999

Page 1 of 2

Employment sector/ field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/ Alaskan Native
All sectors	$70,000	$70,000	$60,000	$70,000	$62,400	$61,000
Sciences	66,600	68,000	59,000	63,000	60,000	58,800
Computer and information sciences	80,500	81,000	S	80,000	90,000	S
Mathematical sciences	67,000	69,000	63,000	65,000	57,400	S
Biological and agricultural sciences	64,000	66,000	55,000	52,000	60,000	61,000
Health sciences	65,000	64,600	60,000	73,000	61,000	S
Physical and related sciences	75,000	77,000	67,000	70,000	72,000	76,800
Social sciences	62,000	63,000	59,000	60,000	55,000	53,000
Psychology	60,000	62,000	55,000	51,000	52,000	54,000
Engineering	82,000	85,000	72,000	80,000	72,000	S
Universities and 4-year colleges	60,000	60,000	55,000	52,000	53,000	53,000
Sciences	58,000	60,000	53,000	48,000	51,500	53,000
Computer and information sciences	63,000	62,000	S	64,000	S	S
Mathematical sciences	59,000	60,000	61,000	50,000	55,000	S
Biological and agricultural sciences	57,000	60,000	47,000	40,000	51,500	S
Health sciences	59,500	60,000	58,500	60,000	49,200	S
Physical and related sciences	58,000	60,000	45,000	49,000	60,000	S
Social sciences	59,000	60,000	54,000	54,000	52,000	53,000
Psychology	55,000	55,600	53,000	47,000	48,000	S
Engineering	74,400	75,000	65,000	73,000	60,000	S
Other educational institutions	49,500	49,800	47,500	50,000	52,000	S
Sciences	50,000	50,000	47,500	50,000	52,000	S
Computer and information sciences	S	S	S	S	S	S
Mathematical sciences	50,400	50,400	S	S	S	S
Biological and agricultural sciences	45,000	45,000	S	S	S	S
Health sciences	56,400	56,400	S	S	S	S
Physical and related sciences	45,000	45,000	S	43,000	S	S
Social sciences	46,000	47,000	S	S	S	S
Psychology	55,000	55,000	48,000	S	S	S
Engineering	39,300	35,000	S	S	S	S
Private-for-profit	85,000	88,000	77,000	80,000	83,000	85,000
Sciences	84,000	87,000	75,000	75,000	80,000	89,000
Computer and information sciences	95,000	100,000	S	90,000	S	S
Mathematical sciences	88,000	92,500	S	74,000	S	S
Biological and agricultural sciences	80,100	85,000	75,000	68,000	75,000	S
Health sciences	88,200	92,000	S	83,000	S	S
Physical and related sciences	85,000	88,500	75,000	76,000	88,000	S
Social sciences	90,000	92,000	S	78,000	S	S
Psychology	75,000	77,000	75,000	70,000	71,500	S
Engineering	86,000	90,000	89,000	81,500	85,000	S
Self-employed	75,000	72,000	96,000	75,000	72,000	S
Sciences	70,000	70,000	96,000	56,000	72,000	S
Computer and information sciences	S	S	S	S	S	S
Mathematical sciences	100,000	100,000	S	S	S	S
Biological and agricultural sciences	50,000	45,000	S	50,000	S	S
Health sciences	60,000	60,000	S	S	S	S
Physical and related sciences	70,000	75,000	S	S	S	S
Social sciences	60,000	60,000	S	S	S	S
Psychology	75,000	75,000	96,000	S	S	S
Engineering	100,000	100,000	S	80,000	S	S

See explanatory information and SOURCE at end of table.

Table 51. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad field of doctorate, and race/ethnicity: 1999

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Sector/field of doctorate	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/ Alaskan Native
Private not-for-profit	$70,000	$71,000	$59,500	$63,900	$64,600	S
Sciences	66,500	70,000	59,500	57,100	55,000	S
Computer and information sciences	95,000	S	S	S	S	S
Mathematical sciences	85,000	86,400	S	S	S	S
Biological and agricultural sciences	65,000	70,000	S	37,900	S	S
Health sciences	72,000	72,000	S	S	S	S
Physical and related sciences	78,000	80,000	S	66,000	S	S
Social sciences	72,000	72,000	65,000	60,000	S	S
Psychology	57,000	58,000	59,500	S	S	S
Engineering	85,000	89,600	S	72,000	S	S
Federal Government	76,000	77,700	73,000	70,000	75,000	S
Sciences	75,000	76,000	71,100	69,000	80,000	S
Computer and information sciences	86,400	86,400	S	S	S	S
Mathematical sciences	76,000	77,000	S	S	S	S
Biological and agricultural sciences	70,000	72,000	75,000	60,000	S	S
Health sciences	73,000	74,000	S	S	S	S
Physical and related sciences	82,000	83,800	S	75,000	85,000	S
Social sciences	80,000	81,000	71,100	S	S	S
Psychology	70,200	70,800	S	S	S	S
Engineering	82,600	84,500	S	74,000	S	S
State and local government	57,000	57,500	57,000	52,000	62,000	S
Sciences	57,000	57,500	59,000	52,000	62,000	S
Computer and information sciences	S	S	S	S	S	S
Mathematical sciences	S	S	S	S	S	S
Biological and agricultural sciences	54,000	54,900	S	45,000	S	S
Health sciences	60,000	62,000	S	S	S	S
Physical and related sciences	57,100	58,000	S	46,000	S	S
Social sciences	56,500	56,500	S	55,000	S	S
Psychology	57,000	57,500	57,000	S	S	S
Engineering	57,000	59,900	S	52,000	S	S
Other sector	100,000	110,000	S	99,000	S	S
Sciences	106,000	110,000	S	99,000	S	S
Computer and information sciences	S	S	S	S	S	S
Mathematical sciences	S	S	S	S	S	S
Biological and agricultural sciences	S	S	S	S	S	S
Health sciences	S	S	S	S	S	S
Physical and related sciences	70,000	S	S	S	S	S
Social sciences	110,000	118,000	S	100,000	S	S
Psychology	S	S	S	S	S	S
Engineering	S	S	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: The race/ethnicity data shown are for all doctoral recipients, including temporary residents.
Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

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Table 52. Median annual salaries of full-time employed doctoral scientists and engineers, by field of doctorate and primary or secondary work activity: 1999

Field of doctorate	Total	R&D[1]	Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
All fields	$70,000	$70,400	$58,000	$80,000	$71,600	$68,000	$60,000
Sciences	66,600	68,000	56,000	78,000	67,700	66,000	57,500
Computer and information sciences	80,500	80,000	62,000	95,000	85,200	S	S
Mathematical sciences	67,000	68,000	55,000	90,000	70,700	87,700	64,000
Biological and agricultural sciences	64,000	63,000	58,000	75,000	54,000	80,000	55,000
Agricultural/food sciences	64,000	64,000	56,800	73,500	55,000	72,000	49,300
Biological sciences	64,000	63,000	59,000	77,000	54,000	84,800	58,000
Environmental life sciences	61,000	61,000	52,000	65,000	55,200	64,200	52,000
Health sciences	65,000	65,000	56,400	75,000	60,200	65,000	66,000
Physical and related sciences	75,000	76,000	55,000	88,000	70,000	79,000	70,300
Chemistry except biochemistry	75,000	76,500	52,000	88,000	68,000	81,300	68,000
Earth/atmos/ocean sciences	63,800	65,000	52,000	76,000	60,000	63,000	62,200
Physics and astronomy	79,900	80,000	61,800	92,000	75,000	80,000	81,000
Social sciences	62,000	61,200	55,600	78,000	60,000	69,000	55,000
Economics	75,000	73,900	66,000	99,000	62,000	100,000	53,900
Political and related sciences	62,000	60,000	54,000	80,000	60,000	61,000	57,000
Sociology	56,000	55,000	51,000	70,000	56,000	60,000	57,000
Other social sciences	56,000	55,000	51,000	65,000	56,000	59,000	52,000
Psychology	60,000	61,000	55,000	65,000	65,000	60,000	55,000
Engineering	82,000	80,000	71,000	96,000	79,400	92,000	75,000
Aerospace/aeronautical engineering	81,000	76,500	81,200	95,000	75,000	S	S
Chemical engineering	84,000	82,500	73,000	93,000	82,000	95,000	85,000
Civil engineering	76,000	73,000	68,400	90,000	70,000	85,000	78,000
Electrical/computer engineering	90,000	86,000	75,000	105,000	85,000	97,000	90,000
Materials/metallurgical engineering	80,000	79,000	68,200	95,000	81,100	78,500	75,000
Mechanical engineering	76,500	77,000	69,000	90,000	70,000	80,000	68,000
Other engineering	80,000	80,000	69,500	90,000	78,000	100,000	75,000

[1] R&D includes basic or applied research, development and design.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 53. Median annual salaries of full-time employed doctoral scientists and engineers, by employer location and broad field of doctorate: 1999

Page 1 of 2

Employer location	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social and related sciences	Psychology	Engineering
All locations	$66,600	$80,500	$67,000	$64,000	$65,000	$75,000	$62,000	$60,000	$82,000
New England	66,000	87,000	70,000	60,000	65,000	77,000	65,000	60,000	82,000
Connecticut	76,000	S	99,200	73,000	65,000	83,000	71,700	66,000	87,500
Maine	57,000	S	S	46,000	S	52,000	63,000	60,000	S
Massachusetts	66,500	89,000	68,000	60,000	73,000	75,000	65,000	59,000	84,000
New Hampshire	59,400	S	S	S	S	57,000	66,300	53,000	75,000
Rhode Island	61,200	S	S	57,000	S	63,000	57,000	62,000	80,000
Vermont	50,000	S	S	50,000	S	S	49,000	41,500	85,000
Middle Atlantic	71,500	90,000	75,000	69,000	70,000	80,000	65,000	67,000	86,000
New Jersey	80,600	90,000	90,000	80,000	70,000	85,000	69,000	74,000	90,000
New York	70,000	91,500	70,000	65,000	72,000	79,000	65,000	66,000	85,000
Pennsylvania	65,000	62,000	63,000	65,000	63,000	70,000	65,000	62,000	80,000
East North Central	63,000	66,000	63,000	62,000	62,000	70,000	60,000	60,000	75,000
Illinois	65,800	75,000	65,000	63,000	60,000	70,000	65,000	65,000	78,000
Indiana	63,000	S	50,000	67,200	55,000	80,000	58,000	60,000	70,000
Michigan	64,000	S	67,000	60,000	75,000	78,500	60,000	60,000	80,000
Ohio	61,800	S	60,000	67,000	60,000	67,000	56,000	59,400	75,000
Wisconsin	58,000	S	61,000	52,000	63,000	64,000	60,000	52,900	72,000
West North Central	59,000	74,000	52,000	61,000	56,000	66,000	51,000	56,000	75,000
Iowa	55,000	S	51,000	62,500	S	46,700	55,000	51,000	66,000
Kansas	50,000	S	S	55,000	S	52,000	47,500	60,000	72,400
Minnesota	61,000	S	70,000	64,000	60,000	76,000	54,000	57,000	80,000
Missouri	59,000	S	55,000	63,000	S	65,000	53,500	52,000	79,000
Nebraska	55,000	S	S	60,000	S	S	S	60,000	S
North Dakota	60,000	S	S	65,300	S	46,000	58,000	60,000	S
South Dakota	50,000	S	S	55,000	S	S	S	48,000	S
South Atlantic	69,000	75,000	70,000	67,000	68,000	74,500	70,000	60,200	84,000
Delaware	85,000	S	S	90,000	S	89,000	70,000	60,000	90,000
District of Columbia	84,600	S	83,000	70,000	80,000	85,000	90,000	73,000	99,500
Florida	57,200	70,000	46,300	58,600	56,400	59,500	53,000	57,000	73,000
Georgia	60,000	70,000	61,000	65,000	65,000	63,000	52,000	60,000	85,000
Maryland	71,000	73,000	75,000	70,000	80,000	77,000	68,000	57,000	89,000
North Carolina	66,000	75,000	66,000	70,000	71,000	74,000	57,000	59,000	85,200
South Carolina	60,000	S	65,000	60,000	55,500	65,000	55,000	58,000	78,000
Virginia	71,000	80,000	85,000	66,000	69,000	76,000	61,900	68,000	86,000
West Virginia	65,000	S	S	60,000	S	75,000	46,000	S	79,000

See explanatory information and SOURCE at end of table.

Table 53. Median annual salaries of full-time employed doctoral scientists and engineers, by employer location and broad field of doctorate: 1999

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Employer location	Sciences	Computer and information sciences	Mathematical sciences	Biological and agricultural sciences	Health sciences	Physical and related sciences	Social and related sciences	Psychology	Engineering
East South Central	$61,000	$[illegible]1,000	$59,500	$59,000	$62,000	$70,000	$55,000	$64,000	$73,000
Alabama	65,000	S	61,000	66,000	79,200	80,000	47,800	60,000	78,000
Kentucky	56,000	S	61,200	55,400	46,000	63,900	48,000	65,500	67,500
Mississippi	60,000	S	S	61,000	58,000	61,000	63,000	60,000	76,000
Tennessee	62,000	S	54,000	54,300	71,000	70,000	59,000	65,000	70,000
West South Central	64,000	86,000	56,000	60,800	58,600	75,000	58,400	60,000	80,000
Arkansas	55,500	S	S	54,000	S	75,000	50,000	54,300	S
Louisiana	63,000	S	50,000	63,000	54,000	70,000	64,000	50,500	76,000
Oklahoma	55,000	S	S	59,900	47,000	66,000	55,000	55,000	64,000
Texas	67,000	89,000	61,000	63,000	64,000	78,000	60,000	60,000	83,000
Mountain	62,000	62,000	66,000	60,000	56,000	75,000	56,000	55,200	80,000
Arizona	60,000	S	S	60,000	56,000	65,000	56,000	60,000	77,000
Colorado	60,500	S	68,000	60,000	60,000	73,000	55,700	55,200	82,000
Idaho	60,000	S	S	58,500	S	70,000	S	50,000	88,000
Montana	50,400	S	S	55,100	S	60,000	S	50,400	S
New Mexico	75,900	S	77,000	63,000	S	84,500	45,000	48,800	82,000
Nevada	75,000	S	S	73,000	S	81,000	69,500	60,000	75,000
Utah	57,000	S	86,000	57,000	S	50,000	62,000	52,000	81,000
Wyoming	48,000	S	S	S	S	65,000	S	S	S
Pacific	70,000	86,600	75,000	65,000	69,000	80,000	65,000	65,000	90,000
Alaska	60,000	S	S	52,000	S	61,000	S	S	S
California	75,000	92,700	75,000	70,000	74,000	83,000	70,000	67,000	90,000
Hawaii	60,000	S	S	60,000	S	72,300	59,000	62,000	S
Oregon	60,000	S	S	56,500	66,000	65,000	59,000	52,000	72,000
Washington	60,000	S	80,000	56,000	64,500	65,000	58,500	59,000	78,000
Puerto Rico	47,800	S	S	48,500	S	S	S	36,000	S
Other U.S. territories and other areas	69,000	S	S	70,000	S	S	S	S	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: Since the survey sample design does not include geography, the reliability of estimates in some states may be poor due to small sample size.

Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 54. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, and faculty rank: 1999

Field of doctorate/sex	Total	Full professor	Associate professor	Assistant professor	Instructor/ lecturer	Adjunct faculty	Other faculty	Does not apply
All fields	$60,000	$78,000	$59,000	$48,000	$39,000	$50,000	$48,000	$40,000
Male	63,000	80,000	60,000	49,000	41,000	52,000	S	42,000
Female	50,000	72,000	55,000	46,000	36,400	46,000	S	35,000
Sciences	58,000	76,000	57,000	46,300	38,000	46,000	48,000	39,000
Male	60,000	78,000	58,000	47,500	40,000	47,000	S	41,000
Female	50,000	72,000	55,000	45,600	36,000	46,000	S	35,000
Computer and information sciences	63,000	78,000	66,600	56,600	S	S	S	65,000
Male	65,000	78,000	68,500	57,000	S	S	S	66,200
Female	60,000	S	60,000	52,000	S	S	S	S
Mathematical sciences	59,000	73,000	50,100	40,500	40,000	S	S	47,000
Male	60,000	75,000	50,000	41,000	40,000	S	S	47,000
Female	48,400	69,000	55,000	39,600	S	S	S	S
Biological and agricultural sciences	57,000	80,000	62,000	51,000	37,000	43,500	S	32,000
Male	60,000	80,000	62,000	51,000	38,000	42,500	S	34,000
Female	47,700	76,000	60,000	51,000	35,000	S	S	31,000
Health sciences	59,500	85,000	60,000	50,000	S	S	S	45,500
Male	62,000	100,000	62,000	56,000	S	S	S	45,500
Female	55,500	74,200	60,000	48,000	S	S	S	49,500
Physical and related sciences	58,000	78,000	52,000	45,000	43,000	52,000	S	45,000
Male	60,000	79,000	53,000	45,000	43,000	58,000	S	48,000
Female	47,000	70,000	50,000	45,000	S	S	S	38,600
Social sciences	59,000	74,500	54,000	44,000	37,000	38,000	S	58,000
Male	62,000	75,000	55,000	44,300	37,000	49,000	S	65,000
Female	51,000	70,000	52,000	42,700	35,000	32,000	S	47,000
Psychology	55,000	72,000	53,700	45,000	37,000	52,900	S	47,000
Male	60,000	72,800	55,000	45,000	45,000	56,200	S	52,000
Female	50,000	68,000	52,000	45,000	36,000	52,900	S	42,000
Engineering	74,400	88,000	68,000	57,000	47,000	78,000	S	60,000
Male	75,000	89,000	68,000	57,000	47,000	78,000	S	62,000
Female	59,500	84,000	69,000	55,000	S	S	S	40,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 55. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, faculty rank and years since doctorate: 1999

Field of doctorate/sex	Total		Full professor		Associate professor		Assistant professor		Instructor/ lecturer		All other faculty[1]		Does not apply	
	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years
All fields	$43,100	$70,000	$56,000	$79,000	$54,000	$60,000	$46,300	$52,000	$36,300	$48,000	$40,000	$61,000	$33,500	$68,000
Male	44,700	72,000	60,000	80,000	56,000	60,000	48,000	54,000	37,000	48,000	41,000	66,700	35,000	75,000
Female	42,000	60,000	52,000	72,700	51,000	57,000	45,000	50,300	35,000	45,000	36,700	56,000	32,000	54,000
Sciences	42,000	68,000	58,000	77,000	51,200	58,500	45,000	52,000	36,000	45,000	38,000	56,000	33,000	64,000
Male	42,600	70,000	61,200	78,000	52,000	60,000	45,000	53,000	37,000	48,000	40,000	57,000	34,000	70,000
Female	42,000	60,000	52,000	72,000	50,000	57,000	45,000	50,200	35,000	44,800	36,700	56,000	31,700	54,000
Computer and information sciences	60,000	74,000	S	79,000	63,400	69,000	56,600	S	S	S	S	S	S	S
Male	60,000	75,000	S	79,000	64,000	73,000	58,300	S	S	S	S	S	S	S
Female	56,000	70,000	S	S	S	S	52,000	S	S	S	S	S	S	S
Mathematical sciences	41,400	65,000	S	74,300	45,000	53,000	40,500	45,000	39,000	S	S	S	39,000	95,000
Male	42,000	66,000	S	75,000	45,000	52,000	41,000	S	39,000	S	S	S	39,000	95,000
Female	40,000	60,000	S	69,000	S	55,000	39,000	S	S	S	S	S	S	S
Biological and agricultural sciences	37,000	70,000	30,500	80,000	52,500	63,000	49,000	56,000	36,000	41,000	41,000	55,000	30,000	56,000
Male	38,000	71,000	S	80,500	55,000	63,000	49,700	58,000	37,000	45,000	41,000	60,000	31,000	60,000
Female	34,000	62,000	S	77,200	48,000	62,000	48,000	54,000	33,300	36,200	S	S	30,000	46,400
Health sciences	50,000	70,800	58,400	86,000	56,800	62,000	48,600	60,000	S	S	S	S	44,500	64,000
Male	53,000	77,000	S	100,000	62,000	61,000	55,000	S	S	S	S	S	45,000	S
Female	50,000	65,000	S	78,000	55,000	62,000	48,000	55,800	S	S	S	S	42,000	S
Physical and related sciences	42,000	70,000	S	78,000	50,000	53,400	44,400	48,000	33,000	52,000	S	61,000	36,000	78,000
Male	42,000	70,000	S	79,000	50,600	54,000	45,000	50,400	36,000	52,500	S	61,000	36,000	80,100
Female	41,000	54,000	S	70,000	50,000	48,300	43,000	47,700	S	S	S	S	33,000	51,000
Social sciences	45,000	65,400	64,000	75,000	50,000	55,000	43,000	46,500	32,000	45,000	32,000	53,000	47,000	70,000
Male	46,000	69,000	62,000	75,000	50,000	58,000	44,000	45,000	S	45,000	38,000	S	54,000	84,000
Female	43,000	58,800	S	70,000	50,000	53,000	42,000	47,000	31,000	S	10,000	S	42,000	57,000
Psychology	43,500	64,000	S	72,000	50,000	55,000	43,000	51,000	36,000	48,000	44,000	61,000	38,500	60,000
Male	43,500	66,500	S	73,000	52,000	55,000	42,300	59,000	S	S	S	S	43,000	67,000
Female	43,000	59,500	S	70,000	48,000	53,000	45,000	45,600	36,000	S	S	S	35,000	55,000
Engineering	56,000	84,000	S	89,000	65,000	70,000	56,500	60,000	45,000	S	S	82,000	40,000	94,500
Male	56,500	84,000	S	89,500	65,000	70,000	56,500	62,000	46,000	S	S	82,000	42,000	93,000
Female	54,500	80,000	S	84,000	68,000	74,000	55,000	S	S	S	S	S	37,000	S

[1] 'All other faculty' includes adjunct or other faculty.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 56. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and faculty rank: 1999

Page 1 of 2

Field of doctorate and race/ethnicity	Total	Full professor	Associate professor	Assistant professor	Instructor/ lecturer	All other faculty[2]	Does not apply
All fields	$60,000	$78,000	$59,000	$48,000	$39,000	$50,000	$40,000
White[1]	60,000	78,600	59,000	47,000	39,000	50,000	42,000
Black	55,000	76,000	59,000	46,400	S	S	37,700
Asian/Pacific Islander	52,000	80,000	60,000	51,000	40,000	47,000	32,000
Hispanic	53,000	74,000	55,000	50,000	33,000	S	38,000
American Indian/Alaskan Native	53,000	61,000	S	S	S	S	S
Sciences	58,000	76,000	57,000	46,300	38,000	46,000	39,000
White[1]	60,000	77,000	57,000	46,000	38,000	47,000	42,000
Black	53,000	76,000	56,700	45,000	S	S	37,700
Asian/Pacific Islander	48,000	75,000	58,000	50,000	39,000	45,000	31,500
Hispanic	51,500	72,000	55,000	48,000	32,500	S	37,500
American Indian/Alaskan Native	53,000	55,000	S	S	S	S	S
Computer and information sciences	63,000	78,000	66,600	56,600	S	S	65,000
White[1]	62,000	79,000	66,000	53,000	S	S	S
Black	S	S	S	S	S	S	S
Asian/Pacific Islander	64,000	S	67,000	61,000	S	S	S
Hispanic	S	S	S	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S	S	S
Mathematical sciences	59,000	73,000	50,100	40,500	40,000	S	47,000
White[1]	60,000	75,000	52,000	40,500	41,000	S	43,000
Black	61,000	S	S	S	S	S	S
Asian/Pacific Islander	50,000	68,000	50,000	39,000	S	S	S
Hispanic	55,000	S	S	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S	S	S
Biological and agricultural sciences	57,000	80,000	62,000	51,000	37,000	45,000	32,000
White[1]	60,000	80,000	62,000	50,000	37,000	48,000	34,000
Black	47,000	84,000	56,000	47,000	S	S	31,000
Asian/Pacific Islander	40,000	76,000	63,000	56,000	37,000	S	30,000
Hispanic	51,500	84,300	63,000	56,000	S	S	32,300
American Indian/Alaskan Native	S	S	S	S	S	S	S
Health sciences	59,500	85,000	60,000	50,000	S	S	45,500
White[1]	60,000	84,000	60,000	49,000	S	S	47,900
Black	58,500	S	S	55,000	S	S	S
Asian/Pacific Islander	60,000	S	S	56,000	S	S	S
Hispanic	49,200	S	S	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S	S	S
Physical and related sciences	58,000	78,000	52,000	45,000	43,000	50,000	45,000
White[1]	60,000	78,000	52,300	45,000	39,000	52,000	50,000
Black	45,000	S	S	42,900	S	S	S
Asian/Pacific Islander	49,000	88,000	51,000	49,000	S	S	36,000
Hispanic	60,000	76,000	55,000	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S	S	S
Social sciences	59,000	74,500	54,000	44,000	37,000	38,000	58,000
White[1]	60,000	75,000	54,000	43,300	37,000	40,000	58,000
Black	54,000	76,000	53,000	44,000	S	S	S
Asian/Pacific Islander	54,000	70,000	54,000	45,000	S	S	53,000
Hispanic	52,000	65,000	51,000	46,400	S	S	S
American Indian/Alaskan Native	53,000	S	S	S	S	S	S

See explanatory information and SOURCE at end of table.

Table 56. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and academic rank: 1999

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Field of doctorate and race/ethnicity	Total	Full professor	Associate professor	Assistant professor	Instructor/ lecturer	All other faculty[2]	Does not apply
Psychology	55,000	72,000	53,700	45,000	37,000	52,900	47,000
White[1]	55,600	72,000	53,500	44,000	37,000	52,900	48,000
Black	53,000	S	59,000	45,000	S	S	52,000
Asian/Pacific Islander	47,000	S	S	S	S	S	S
Hispanic	48,000	S	S	48,000	S	S	40,000
American Indian/Alaskan Native	S	S	S	S	S	S	S
Engineering	74,400	88,000	68,000	57,000	47,000	78,000	60,000
White[1]	75,000	90,000	69,000	57,000	50,000	78,000	70,000
Black	65,000	S	65,500	S	S	S	S
Asian/Pacific Islander	73,000	86,000	67,000	58,100	S	S	55,000
Hispanic	60,000	S	S	S	S	S	40,000
American Indian/Alaskan Native	S	S	S	S	S	S	S

[1] 'Other' race included with 'white'.

[2] 'All other faculty' includes adjunct or other faculty.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 57. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, and tenure status: 1999

Field of doctorate/sex	Total	Tenured	Not tenured		Tenure not applicable
			On tenure track	Not on tenure track	
All fields	$60,000	$70,000	$49,000	$45,000	$46,000
Male	63,000	71,000	50,000	46,600	50,000
Female	50,000	60,000	46,000	43,000	40,000
Sciences	58,000	68,000	47,600	45,000	45,000
Male	60,000	70,000	49,000	45,000	48,000
Female	50,000	60,000	46,000	43,000	39,000
Computer and information sciences	63,000	70,000	57,000	60,000	63,000
Male	65,000	70,000	59,000	65,000	65,000
Female	60,000	62,000	57,000	S	S
Mathematical sciences	59,000	65,000	40,500	41,000	47,000
Male	60,000	65,000	40,000	40,000	50,000
Female	48,400	59,600	40,500	S	S
Biological and agricultural sciences	57,000	71,000	54,000	41,000	36,000
Male	60,000	72,000	54,000	42,500	38,500
Female	47,700	67,000	53,000	38,000	32,000
Health sciences	59,500	67,000	50,000	54,000	54,000
Male	62,000	75,000	58,000	60,000	46,700
Female	55,500	62,000	48,000	52,000	56,000
Physical and related sciences	58,000	69,000	45,000	45,800	50,000
Male	60,000	70,000	46,500	49,000	52,000
Female	47,000	55,000	45,000	41,000	40,000
Social sciences	59,000	65,000	43,300	45,000	55,000
Male	62,000	68,000	45,000	48,000	58,000
Female	51,000	58,000	42,400	42,000	48,000
Psychology	55,000	63,000	45,000	48,000	48,800
Male	60,000	67,000	45,000	50,000	55,000
Female	50,000	58,000	44,000	46,000	45,000
Engineering	74,400	81,000	57,000	55,000	72,000
Male	75,000	82,000	57,000	60,000	73,500
Female	59,500	73,000	55,000	47,000	65,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 58. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, sex, tenure status, and years since doctorate: 1999

	Total		Tenured		Not tenured				Tenure not applicable	
					On tenure track		Not on tenure track			
Field of doctorate/sex	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years	Less than 10 years	10 or more years
All fields	$43,100	$70,000	$53,000	$71,000	$47,000	$57,000	$39,000	$60,000	$35,200	$68,000
Male	44,700	72,000	55,000	72,200	49,000	58,400	38,400	65,000	36,000	73,000
Female	42,000	60,000	51,000	63,000	45,000	55,000	39,000	54,500	33,000	56,100
Sciences	42,000	68,000	51,000	70,000	45,000	56,000	38,000	60,000	35,000	65,000
Male	42,600	70,000	51,200	70,500	46,500	58,000	37,000	64,000	35,200	69,000
Female	42,000	60,000	50,000	63,000	44,000	55,000	39,000	54,000	33,000	56,000
Computer and information sciences	60,000	74,000	63,400	75,000	57,000	S	S	S	63,000	S
Male	60,000	75,000	64,000	75,000	58,300	S	S	S	S	S
Female	56,000	70,000	S	70,000	57,000	S	S	S	S	S
Mathematical sciences	41,400	65,000	45,000	66,000	40,500	S	40,000	45,000	38,300	63,000
Male	42,000	66,000	45,000	66,500	40,500	S	40,000	45,000	36,000	63,000
Female	40,000	60,000	S	61,600	39,600	S	S	S	S	S
Biological and agricultural sciences	37,000	70,000	52,000	72,000	50,000	60,000	35,000	61,000	31,000	63,000
Male	38,000	71,000	52,000	73,500	50,000	61,000	35,000	65,000	32,000	66,700
Female	34,000	62,000	48,000	69,000	47,000	60,000	35,000	52,000	30,000	52,000
Health sciences	50,000	70,800	55,000	72,000	48,000	60,000	51,000	60,000	46,700	74,000
Male	53,000	77,000	62,000	78,000	55,000	S	56,000	73,000	40,000	S
Female	50,000	65,000	55,000	67,000	46,500	56,000	51,000	57,000	50,000	74,000
Physical and related sciences	42,000	70,000	50,000	70,000	45,000	50,000	36,000	65,000	37,000	72,000
Male	42,000	70,000	50,600	70,200	46,000	50,000	36,000	70,000	38,500	78,000
Female	41,000	54,000	48,000	60,000	43,500	S	39,000	50,000	35,000	51,000
Social sciences	45,000	65,400	50,000	68,000	43,000	45,000	40,000	51,000	43,000	63,000
Male	46,000	69,000	50,200	70,000	45,000	44,700	40,500	53,000	48,000	65,000
Female	43,000	58,800	48,500	60,000	42,000	45,000	38,000	45,600	40,000	58,000
Psychology	43,500	64,000	50,000	65,400	42,900	60,000	43,000	61,000	42,000	60,000
Male	43,500	66,500	48,000	68,000	42,500	65,000	43,500	60,000	44,000	67,000
Female	43,000	59,500	52,000	60,000	43,000	51,000	43,000	61,000	40,000	56,000
Engineering	56,000	84,000	65,000	84,000	57,000	64,000	50,000	80,000	47,000	93,000
Male	56,500	84,000	65,000	85,000	57,000	65,000	50,000	78,000	47,000	92,200
Female	54,500	80,000	69,000	80,000	55,900	S	47,000	S	40,000	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 59. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and tenure status: 1999

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Field of doctorate and race/ethnicity	Total	Tenured	Not tenured		Tenure not applicable
			On tenure track	Not on tenure track	
All fields	$60,000	$70,000	$49,000	$45,000	$46,000
White[1]	60,000	70,000	48,000	47,500	50,000
Black	55,000	65,000	50,000	40,500	42,000
Asian/Pacific Islander	52,000	70,000	51,800	40,000	35,000
Hispanic	53,000	62,000	50,000	45,000	40,000
American Indian/Alaskan Native	53,000	55,000	S	S	S
Sciences	58,000	68,000	47,600	45,000	45,000
White[1]	60,000	68,000	47,000	46,000	48,000
Black	53,000	65,000	46,000	40,500	42,000
Asian/Pacific Islander	48,000	67,000	50,000	40,000	33,000
Hispanic	51,500	60,000	48,000	43,600	39,000
American Indian/Alaskan Native	53,000	54,000	S	S	S
Computer and information sciences	63,000	70,000	57,000	60,000	63,000
White[1]	62,000	70,000	56,600	60,000	60,000
Black	S	S	S	S	S
Asian/Pacific Islander	64,000	70,000	60,000	S	S
Hispanic	S	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S
Mathematical sciences	59,000	65,000	40,500	41,000	47,000
White[1]	60,000	65,000	40,000	42,000	50,000
Black	61,000	S	S	S	S
Asian/Pacific Islander	50,000	60,000	39,800	S	S
Hispanic	55,000	57,400	S	S	S
American Indian/Alaskan Native	S	S	S	S	S
Biological and agricultural sciences	57,000	71,000	54,000	41,000	36,000
White[1]	60,000	71,500	52,000	43,000	39,000
Black	47,000	65,000	50,000	31,000	37,000
Asian/Pacific Islander	40,000	70,000	60,000	36,000	30,000
Hispanic	51,500	63,000	60,000	45,000	35,000
American Indian/Alaskan Native	S	S	S	S	S
Health sciences	59,500	67,000	50,000	54,000	54,000
White[1]	60,000	66,000	48,000	55,000	54,300
Black	58,500	S	55,000	S	S
Asian/Pacific Islander	60,000	S	S	S	S
Hispanic	49,200	S	S	S	S
American Indian/Alaskan Native	S	S	S	S	S
Physical and related sciences	58,000	69,000	45,000	45,800	50,000
White[1]	60,000	68,700	46,000	48,000	55,600
Black	45,000	S	42,900	S	S
Asian/Pacific Islander	49,000	73,000	45,000	45,000	38,000
Hispanic	60,000	68,000	S	S	S
American Indian/Alaskan Native	S	S	S	S	S
Social sciences	59,000	65,000	43,300	45,000	55,000
White[1]	60,000	66,000	43,300	45,000	55,000
Black	54,000	65,000	44,000	S	49,300
Asian/Pacific Islander	54,000	62,000	43,000	45,000	52,000
Hispanic	52,000	58,100	44,000	S	S
American Indian/Alaskan Native	53,000	S	S	S	S

See explanatory information and SOURCE at end of table.

Table 59. Median annual salaries of full-time employed doctoral scientists and engineers in universities and 4-year colleges, by broad field of doctorate, race/ethnicity, and tenure status: 1999

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Field of doctorate and race/ethnicity	Total	Tenured	Not tenured		Tenure not applicable
			On tenure track	Not on tenure track	
Psychology	$55,000	$63,000	$45,000	$48,000	$48,800
White[1]	55,600	64,000	44,000	48,800	50,000
Black	53,000	59,000	S	S	55,000
Asian/Pacific Islander	47,000	55,000	S	S	46,000
Hispanic	48,000	55,000	46,500	S	45,000
American Indian/Alaskan Native	S	S	S	S	S
Engineering	74,400	81,000	57,000	55,000	72,000
White[1]	75,000	83,000	57,000	60,000	75,000
Black	65,000	71,600	62,700	S	S
Asian/Pacific Islander	73,000	80,000	58,100	48,000	72,000
Hispanic	60,000	71,000	S	S	40,000
American Indian/Alaskan Native	S	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTE: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 60. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1999

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Occupation	Total			White[1]			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All occupations	$70,000	$75,000	$57,000	$70,000	$75,000	$57,600	$60,000	$63,000	$55,000
Scientists	64,700	68,000	55,000	65,000	69,000	55,000	55,000	57,000	52,000
Computer and information scientists	80,000	80,000	70,000	80,000	81,500	72,000	63,000	63,000	S
Computer/information scientists	82,000	83,000	76,000	85,000	85,000	80,000	65,000	65,000	S
Postsecondary teachers, computer sciences	64,900	66,000	57,000	65,000	67,000	57,000	S	S	S
Mathematical scientists	61,000	63,000	57,000	63,000	63,300	58,000	61,000	63,000	S
Mathematical scientists	78,000	83,000	68,000	82,000	86,400	68,000	S	S	S
Postsecondary teachers, math sciences	55,000	55,000	48,400	55,000	58,000	50,000	S	S	S
Life and related scientists	61,000	65,000	52,000	64,000	67,000	54,000	49,000	47,000	50,000
Agricultural scientists	65,800	70,000	58,000	68,000	70,000	56,800	S	S	S
Biological scientists	61,000	66,500	50,000	65,000	70,000	52,000	40,000	38,000	54,000
Forestry and conservation scientists	61,000	63,000	49,000	61,000	63,000	49,000	S	S	S
Postsecondary teachers, life and related sciences	60,000	62,500	55,000	60,700	63,000	55,000	50,000	54,000	48,000
Physical and related scientists	70,000	71,000	61,000	71,000	73,000	60,000	62,000	60,000	S
Chemists, except biochemistry	75,000	77,000	70,000	79,000	80,000	70,000	71,000	70,000	S
Earth scientists	75,000	75,000	66,000	75,000	75,000	67,000	S	S	S
Physics and astronomers	80,000	80,000	65,000	80,000	81,000	65,000	S	S	S
Other physical scientists	74,000	76,000	S	75,000	76,000	S	S	S	S
Postsecondary teachers, physical and related sciences	56,000	57,500	50,000	56,400	58,000	50,000	47,900	50,000	S
Social scientists	60,000	62,000	53,000	60,000	63,000	54,000	54,000	55,000	54,000
Economists	89,000	90,000	81,000	93,000	95,000	89,100	S	S	S
Political scientists	75,000	75,000	61,900	75,000	75,000	77,000	S	S	S
Sociologists and anthropologists	55,900	60,000	53,000	55,900	60,000	53,000	S	S	S
S&T historians and other social scientists	60,000	60,000	55,000	60,000	64,000	57,000	S	S	S
Postsecondary teachers, social sciences	55,000	58,400	50,000	55,500	59,000	51,000	53,000	55,000	51,000
Psychologists	58,700	62,000	52,000	60,000	63,000	52,800	52,000	55,000	51,000
Psychologists	60,000	66,000	55,700	62,000	66,500	56,000	57,000	60,000	52,000
Postsecondary teachers, psychology	52,000	56,000	48,100	53,000	57,000	48,000	52,000	52,000	51,000
Engineers	80,000	80,000	72,000	80,000	81,800	72,000	72,000	71,600	S
Aerospace/aeronautical engineers	83,700	83,700	S	85,000	84,600	S	S	S	S
Chemical engineers	80,000	81,800	74,000	82,200	84,000	75,000	S	S	S
Civil and architectural engineers	70,000	70,000	S	73,000	76,000	S	S	S	S
Electrical and related engineers	86,000	87,000	79,300	90,000	90,000	77,800	85,000	S	S
Materials/metallurgical engineers	84,800	85,000	S	85,000	85,000	S	S	S	S
Mechanical engineers	75,000	76,500	60,000	80,000	80,000	S	S	S	S
Other engineers	78,700	80,000	72,000	80,000	80,000	72,000	75,000	S	S
Postsecondary teachers, engineering	72,400	74,000	62,000	73,000	74,000	62,000	67,000	67,000	S
Non-S&E occupations	82,000	90,700	61,000	83,000	93,000	62,000	67,000	74,000	58,000
Managers, administrators, etc.	100,000	104,000	82,000	100,000	104,000	83,000	82,000	85,000	71,000
Health and related occupations	80,000	100,000	60,000	90,000	100,000	62,000	60,000	80,000	44,000
Teachers, except S&E postsecondary teachers	57,000	63,000	51,000	58,000	63,000	51,000	53,000	53,000	53,000
Social services and related occupations	41,000	42,000	40,000	42,000	45,000	40,000	S	S	S
Technicians/technologists	71,500	74,900	61,000	70,000	71,500	62,000	S	S	S
Sales and marketing occupations	75,000	79,000	62,500	75,000	76,000	50,000	S	S	S
Other non-S&E occupations	57,000	60,000	51,200	57,000	60,000	51,000	50,000	S	S

See explanatory information and SOURCE at end of table.

Table 60. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1999

Occupation	Asian or Pacific Islander			Hispanic			American Indian/ Alaskan Native		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All occupations	$70,000	$73,000	$58,000	$62,400	$70,000	$50,000	$61,000	$61,000	$54,400
Scientists	62,000	65,000	56,000	60,000	65,000	48,000	56,000	56,000	55,000
Computer and information scientists	76,000	78,200	70,000	86,000	100,000	S	S	S	S
Computer/information scientists	80,000	80,000	73,800	91,000	100,000	S	S	S	S
Postsecondary teachers, computer sciences	62,000	62,000	S	S	S	S	S	S	S
Mathematical scientists	58,000	54,400	62,000	55,000	56,000	S	S	S	S
Mathematical scientists	73,000	74,000	69,000	S	S	S	S	S	S
Postsecondary teachers, math sciences	47,000	47,000	45,500	55,000	55,000	S	S	S	S
Life and related scientists	52,000	53,300	48,000	60,000	65,000	42,000	56,000	S	S
Agricultural scientists	54,500	54,500	S	65,800	73,500	S	S	S	S
Biological scientists	45,000	50,000	45,000	53,000	65,800	37,500	59,000	S	S
Forestry and conservation scientists	S	S	S	S	S	S	S	S	S
Postsecondary teachers, life and related sciences	58,000	60,000	52,000	60,000	60,000	S	S	S	S
Physical and related scientists	65,100	65,000	67,000	67,000	70,000	48,600	61,000	61,000	S
Chemists, except biochemistry	69,000	69,000	68,000	70,000	75,000	S	S	S	S
Earth scientists	63,800	64,000	S	S	S	S	S	S	S
Physics and astronomers	67,200	67,000	75,000	S	S	S	S	S	S
Other physical scientists	S	S	S	S	S	S	S	S	S
Postsecondary teachers, physical and related sciences	55,000	55,000	52,000	55,000	61,700	S	S	S	S
Social scientists	59,000	60,000	49,000	57,000	59,000	51,000	53,000	53,000	S
Economists	75,000	75,000	67,200	S	S	S	S	S	S
Political scientists	S	S	S	S	S	S	S	S	S
Sociologists and anthropologists	S	S	S	S	S	S	S	S	S
S&T historians and other social scientists	S	S	S	S	S	S	S	S	S
Postsecondary teachers, social sciences	50,000	54,000	45,000	53,000	58,000	50,000	53,000	S	S
Psychologists	50,000	53,000	48,000	50,900	60,000	46,000	55,000	S	S
Psychologists	50,000	60,000	48,000	52,000	64,000	40,000	56,000	S	S
Postsecondary teachers, psychology	47,800	S	S	50,000	50,000	50,000	S	S	S
Engineers	78,000	78,000	70,000	68,400	68,400	S	S	S	S
Aerospace/aeronautical engineers	82,000	82,900	S	S	S	S	S	S	S
Chemical engineers	79,000	79,000	74,000	S	S	S	S	S	S
Civil and architectural engineers	70,000	70,000	S	55,000	55,000	S	S	S	S
Electrical and related engineers	85,000	85,000	80,000	84,000	84,000	S	S	S	S
Materials/metallurgical engineers	S	S	S	S	S	S	S	S	S
Mechanical engineers	71,000	72,000	S	S	S	S	S	S	S
Other engineers	75,000	76,000	65,000	80,000	80,000	S	S	S	S
Postsecondary teachers, engineering	74,400	75,000	S	67,000	67,000	S	S	S	S
Non-S&E occupations	84,000	90,000	60,000	74,000	90,000	55,000	68,000	85,000	S
Managers, administrators, etc	102,000	105,000	82,700	95,000	105,000	65,300	91,000	S	S
Health and related occupations	58,000	63,000	43,000	74,000	120,000	S	S	S	S
Teachers, except S&E postsecondary teachers	60,000	63,400	46,000	49,000	52,000	49,000	S	S	S
Social services and related occupations	S	S	S	S	S	S	S	S	S
Technicians/technologists	73,000	75,000	60,000	S	S	S	S	S	S
Sales and marketing occupations	84,000	85,800	S	S	S	S	S	S	S
Other non-S&E occupations	58,000	57,000	60,000	S	S	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTE: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 61. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation and citizenship status: 1999

Occupation	Total	U.S. citizen			Non-U.S. citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
All occupations	$70,000	$71,000	$70,000	$78,000	$63,000	$66,000	$55,000
Scientists	64,700	65,000	65,000	70,000	59,000	60,000	45,000
Computer and information scientists	80,000	80,000	80,000	85,000	74,000	75,000	67,000
Computer/information scientists	82,000	85,000	85,000	90,000	75,000	78,200	68,000
Postsecondary teachers, computer sciences	64,900	65,000	62,000	70,000	62,200	64,000	S
Mathematical scientists	61,000	63,000	63,000	65,000	53,000	56,000	43,000
Mathematical scientists	78,000	83,200	85,000	74,000	66,000	70,000	50,400
Postsecondary teachers, math sciences	55,000	56,000	55,000	58,800	47,000	53,000	41,000
Life and related scientists	61,000	64,000	63,000	67,000	41,000	50,000	31,000
Agricultural scientists	65,800	70,000	70,000	70,000	45,000	45,000	41,000
Biological scientists	61,000	65,000	65,000	68,000	38,000	50,000	30,000
Forestry and conservation scientists	61,000	62,000	61,000	S	S	S	S
Postsecondary teachers, life and related sciences	60,000	60,300	60,000	63,500	54,000	56,000	S
Physical and related scientists	70,000	72,000	71,600	74,000	60,000	63,000	43,500
Chemists, except biochemistry	75,000	78,000	80,000	74,500	64,500	69,000	42,000
Earth scientists	75,000	77,000	75,000	90,000	60,000	60,500	60,000
Physics and astronomers	80,000	81,000	81,000	81,000	61,000	63,000	52,000
Other physical scientists	74,000	75,000	75,000	S	S	S	S
Postsecondary teachers, physical and related sciences	56,000	57,000	56,000	60,000	50,000	50,000	S
Social scientists	60,000	60,000	60,000	63,000	55,000	55,000	53,000
Economists	89,000	90,000	92,000	85,000	80,000	76,900	82,000
Political scientists	75,000	75,000	75,000	S	S	S	S
Sociologists and anthropologists	55,900	55,900	55,000	S	S	S	S
S&T historians and other social scientists	60,000	60,000	60,000	S	S	S	S
Postsecondary teachers, social sciences	55,000	55,500	55,000	60,000	50,000	50,000	45,000
Psychologists	58,700	59,000	59,000	57,000	52,000	54,000	42,000
Psychologists	60,000	60,000	61,000	51,300	55,000	55,000	S
Postsecondary teachers, psychology	52,000	52,000	52,000	68,000	50,000	50,900	S
Engineers	80,000	82,000	80,400	84,000	70,000	73,000	65,000
Aerospace/aeronautical engineers	83,700	85,000	87,400	85,000	70,000	70,000	S
Chemical engineers	80,000	82,500	82,000	89,000	70,000	75,000	64,200
Civil and architectural engineers	70,000	80,000	70,500	80,000	56,000	64,000	51,000
Electrical and related engineers	86,000	90,000	90,000	90,000	80,000	85,000	75,000
Materials/metallurgical engineers	84,800	85,000	85,000	S	S	S	S
Mechanical engineers	75,000	82,500	80,000	85,000	65,000	69,000	57,000
Other engineers	78,700	80,500	80,000	85,000	69,000	72,000	60,000
Postsecondary teachers, engineering	72,400	74,000	73,800	75,000	64,000	64,000	56,000
Non-S&E occupations	82,000	83,000	82,000	91,000	70,000	75,000	60,000
Managers, administrators, etc.	100,000	100,000	100,000	108,000	95,000	98,000	85,000
Health and related occupations	80,000	89,000	85,000	95,000	43,000	43,000	42,900
Teachers, except S&E postsecondary teachers	57,000	57,300	56,000	64,000	48,000	51,000	40,000
Social services and related occupations	41,000	42,000	43,000	35,000	S	S	S
Technicians/technologists	71,500	72,000	70,000	75,000	70,000	75,000	65,000
Sales and marketing occupations	75,000	75,000	70,000	90,000	75,000	75,000	S
Other non-S&E occupations	57,000	57,000	57,000	62,500	51,500	51,500	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 62. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation and age: 1999

Occupation	Total	Under 35	35-39	40-44	45-49	50-54	55-59	60-64	65-75
All occupations	$70,000	$50,700	$61,000	$67,000	$72,000	$78,000	$80,000	$82,000	$78,000
Scientists	64,700	44,000	55,000	61,200	67,000	72,000	75,000	75,000	75,000
Computer and information scientists	80,000	71,000	75,000	80,000	82,000	82,000	85,000	85,000	72,000
Computer/information scientists	82,000	75,000	78,200	81,400	90,000	85,000	90,000	89,000	S
Postsecondary teachers, computer sciences	64,900	55,000	62,000	62,000	68,000	65,000	68,000	70,000	S
Mathematical scientists	61,000	45,000	51,200	60,000	65,000	69,000	72,000	67,000	66,500
Mathematical scientists	78,000	60,000	68,000	75,000	86,900	84,500	97,000	97,200	S
Postsecondary teachers, math sciences	55,000	39,000	46,300	50,000	59,000	63,000	67,000	64,000	66,500
Life and related scientists	61,000	32,700	49,200	60,000	67,000	74,000	75,500	79,000	80,000
Agricultural scientists	65,800	52,000	54,000	62,000	64,000	80,000	80,000	76,000	S
Biological scientists	61,000	30,500	49,000	63,000	72,000	80,000	83,000	89,100	89,100
Forestry and conservation scientists	61,000	S	S	55,000	53,000	S	S	S	S
Postsecondary teachers, life and related sciences	60,000	40,000	47,000	56,000	62,000	65,000	70,000	68,000	78,000
Physical and related scientists	70,000	49,000	60,500	68,000	75,000	80,000	80,000	80,000	82,000
Chemists, except biochemistry	75,000	60,000	70,000	79,500	84,000	85,900	84,000	83,000	82,000
Earth scientists	75,000	43,000	62,400	68,000	67,700	85,000	92,000	90,000	100,000
Physics and astronomers	80,000	50,000	64,000	80,000	86,200	84,000	95,000	96,200	88,000
Other physical scientists	74,000	S	S	S	89,000	S	S	S	S
Postsecondary teachers, physical and related sciences	56,000	40,100	47,000	52,000	52,500	66,600	69,000	70,000	69,200
Social scientists	60,000	47,400	48,000	53,000	56,000	65,000	70,500	68,000	70,000
Economists	89,000	70,000	72,800	86,000	90,000	110,000	100,000	97,000	S
Political scientists	75,000	S	S	S	S	S	S	89,000	S
Sociologists and anthropologists	55,900	40,000	48,000	52,000	56,000	60,000	73,000	S	S
S&T historians and other social scientists	60,000	S	S	55,000	64,000	61,000	80,000	S	S
Postsecondary teachers, social sciences	55,000	43,000	44,000	50,000	53,000	60,000	65,000	65,000	67,700
Psychologists	58,700	40,600	50,000	55,000	62,000	65,000	64,000	70,000	60,000
Psychologists	60,000	43,000	54,600	60,000	65,000	68,000	65,000	71,000	59,000
Postsecondary teachers, psychology	52,000	39,000	44,000	48,000	53,000	59,000	60,000	63,500	63,000
Engineers	80,000	68,000	72,500	75,000	84,000	90,000	93,000	90,000	86,400
Aerospace/aeronautical engineers	83,700	66,000	72,000	84,300	80,000	92,500	100,000	103,000	S
Chemical engineers	80,000	69,500	78,000	81,000	90,000	99,300	96,000	89,000	S
Civil and architectural engineers	70,000	52,000	63,000	68,400	80,000	89,000	80,000	102,000	S
Electrical and related engineers	86,000	79,000	80,000	87,000	90,000	96,000	102,000	93,000	101,000
Materials/metallurgical engineers	84,800	S	S	73,200	S	S	S	S	S
Mechanical engineers	75,000	64,000	69,000	72,000	80,000	90,000	90,700	92,000	S
Other engineers	78,700	65,000	73,000	75,000	85,000	90,000	98,000	90,000	76,500
Postsecondary teachers, engineering	72,400	57,000	64,000	67,000	77,600	80,000	83,000	81,800	85,000
Non-S&E occupations	82,000	54,000	72,000	80,000	82,000	87,500	92,000	95,000	80,000
Managers, administrators, etc.	100,000	74,000	90,000	95,000	100,000	100,000	105,000	105,000	98,000
Health and related occupations	80,000	36,000	66,000	89,000	100,000	100,000	95,000	100,000	90,000
Teachers, except S&E postsecondary teachers	57,000	41,500	46,500	50,000	58,000	58,500	63,000	62,000	63,000
Social services and related occupations	41,000	S	S	S	43,000	48,000	50,000	45,000	14,000
Technicians/technologists	71,500	67,800	68,000	75,000	70,000	88,000	71,500	95,500	S
Sales and marketing occupations	75,000	S	80,000	87,000	83,000	76,000	69,000	70,000	50,000
Other non-S&E occupations	57,000	48,000	61,000	60,000	67,000	62,000	57,500	37,000	20,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 63. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation and years since doctorate: 1999

Occupation	Total	5 years or less	6-10 years	11-15 years	16-20 years	21-25 years	More than 25 years
All occupations	$70,000	$51,000	$63,000	$70,000	$78,800	$82,800	$87,000
Scientists	64,700	45,000	58,800	66,000	72,000	76,000	80,000
Computer and information scientists	80,000	70,000	80,000	88,000	82,000	84,000	90,000
Computer/information scientists	82,000	72,000	84,000	90,000	85,000	87,700	91,200
Postsecondary teachers, computer sciences	64,900	55,000	62,000	68,000	75,000	71,400	70,000
Mathematical scientists	61,000	45,000	55,000	60,000	67,000	72,000	72,000
Mathematical scientists	78,000	62,000	74,400	84,000	88,000	96,000	100,000
Postsecondary teachers, math sciences	55,000	39,000	48,000	52,000	62,000	63,000	68,700
Life and related scientists	61,000	35,000	56,000	66,000	75,000	77,000	82,000
Agricultural scientists	65,800	52,000	59,900	70,500	76,000	80,000	80,100
Biological scientists	61,000	32,000	60,000	71,800	81,000	84,000	93,000
Forestry and conservation scientists	61,000	42,500	S	S	S	S	S
Postsecondary teachers, life and related sciences	60,000	40,000	51,000	60,000	65,000	68,000	74,000
Physical and related scientists	70,000	52,000	63,000	70,000	80,500	83,000	83,400
Chemists, except biochemistry	75,000	61,000	75,000	80,000	85,500	88,000	90,000
Earth scientists	75,000	50,000	65,000	74,500	86,000	87,000	99,000
Physics and astronomers	80,000	53,000	70,000	80,000	92,000	90,000	96,000
Other physical scientists	74,000	S	S	70,000	S	S	82,200
Postsecondary teachers, physical and related sciences	56,000	40,000	47,000	52,000	62,000	67,000	70,200
Social scientists	60,000	45,000	51,000	60,000	65,000	70,000	75,000
Economists	89,000	70,000	80,000	94,000	100,000	126,000	99,000
Political scientists	75,000	46,000	S	S	S	S	98,000
Sociologists and anthropologists	55,900	45,000	50,000	60,000	65,000	73,400	78,600
S&T historians and other social scientists	60,000	53,000	60,000	74,000	S	60,000	100,000
Postsecondary teachers, social sciences	55,000	42,000	48,000	55,000	60,000	62,200	71,000
Psychologists	58,700	44,000	55,000	60,200	66,000	69,300	70,000
Psychologists	60,000	45,000	60,000	65,000	70,000	75,000	72,500
Postsecondary teachers, psychology	52,000	40,700	45,000	51,000	55,000	60,000	68,000
Engineers	80,000	68,000	75,000	80,000	89,000	90,900	95,000
Aerospace/aeronautical engineers	83,700	65,400	75,000	85,000	79,000	100,000	99,100
Chemical engineers	80,000	68,000	80,000	81,000	95,000	98,000	99,000
Civil and architectural engineers	70,000	55,000	69,000	80,000	85,000	80,000	95,000
Electrical and related engineers	86,000	78,000	86,500	95,000	96,000	93,000	102,000
Materials/metallurgical engineers	84,800	72,800	S	85,000	S	S	S
Mechanical engineers	75,000	65,000	75,000	80,000	89,000	89,000	94,000
Other engineers	78,700	65,000	78,000	82,600	88,000	90,000	99,100
Postsecondary teachers, engineering	72,400	56,000	64,000	72,200	80,000	84,000	87,000
Non-S&E occupations	82,000	55,000	70,000	79,000	91,200	97,900	100,000
Managers, administrators, etc.	100,000	75,000	84,000	90,600	100,000	105,000	114,000
Health and related occupations	80,000	40,000	72,000	90,000	112,000	120,000	105,000
Teachers, except S&E postsecondary teachers	57,000	45,000	50,500	60,000	64,000	65,000	73,000
Social services and related occupations	41,000	40,000	40,000	42,000	S	36,000	35,000
Technicians/technologists	71,500	65,000	75,000	70,000	70,000	94,000	80,000
Sales and marketing occupations	75,000	62,600	75,000	87,000	83,000	72,000	72,000
Other non-S&E occupations	57,000	46,000	75,000	61,000	64,000	62,000	50,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 64. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation, and sector of employment: 1999

Occupation	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal Government	State and local government	Other sector
All occupations	$70,000	$60,000	$49,500	$85,000	$75,000	$70,000	$76,000	$57,000	$100,000
Scientists	64,700	55,600	50,000	80,000	75,000	65,000	73,700	55,000	106,000
Computer and mathematical scientists	72,000	59,500	50,000	85,000	80,000	80,000	75,000	55,500	S
Computer/information scientists	82,000	59,000	S	85,000	80,000	75,000	78,000	49,300	S
Mathematical scientists	78,000	57,000	S	89,000	S	83,200	71,000	S	S
Postsecondary teachers, computer and math sciences	59,000	59,600	50,000	S	S	S	S	S	S
Life and related scientists	61,000	56,000	45,500	76,000	50,000	57,100	68,100	50,000	S
Agricultural scientists	65,800	56,000	S	74,200	S	S	70,000	S	S
Biological scientists	61,000	42,000	S	78,000	50,000	57,000	68,000	50,000	S
Forestry and conservation scientists	61,000	56,000	S	S	S	S	69,000	S	S
Postsecondary teachers, life and related sciences	60,000	61,000	45,500	S	S	S	S	S	S
Physical and related scientists	70,000	56,000	47,800	80,000	70,000	80,000	80,000	53,000	S
Chemists, except biochemistry	75,000	37,000	S	78,800	55,000	74,000	71,500	46,000	S
Earth scientists	75,000	59,000	S	75,000	S	80,000	85,000	50,000	S
Physics and astronomers	80,000	60,000	S	84,000	S	31,000	80,000	96,200	S
Other physical scientists	74,000	55,000	S	82,200	S	S	75,000	S	S
Postsecondary teachers, physical and related sciences	56,000	57,000	47,800	S	S	S	S	S	S
Social scientists	60,000	55,500	47,000	90,000	80,000	75,000	78,000	53,100	110,000
Economists	89,000	70,000	S	96,000	105,000	75,000	84,700	65,000	115,000
Political scientists	75,000	50,000	S	S	S	72,000	89,000	S	S
Sociologists and anthropologists	55,900	50,000	S	69,000	S	74,000	60,000	47,700	S
S&T historians and other social scientists	60,000	57,000	S	57,000	S	88,000	62,000	S	S
Postsecondary teachers, social and related sciences	55,000	55,000	47,000	S	S	S	S	S	S
Psychologists	58,700	52,000	52,000	70,000	75,000	54,000	67,000	56,000	S
Psychologists	60,000	51,600	55,000	70,000	75,000	54,000	67,000	56,000	S
Postsecondary teachers, psychology	52,000	52,800	50,000	S	S	S	S	S	S
Engineers	80,000	72,800	S	82,000	100,000	83,700	80,000	59,000	S
Aerospace/aeronautical engineers	83,700	88,000	S	83,000	S	90,000	82,000	S	S
Chemical engineers	80,000	55,000	S	81,000	S	80,000	78,400	S	S
Civil and architectural engineers	70,000	64,000	S	76,000	100,000	S	82,900	59,000	S
Electrical and related engineers	86,000	78,000	S	87,300	110,000	90,000	80,000	S	S
Materials/metallurgical engineers	84,800	S	S	85,000	S	S	S	S	S
Mechanical engineers	75,000	78,000	S	75,000	S	80,000	82,000	S	S
Other engineers	78,700	65,000	S	80,000	75,000	84,000	78,000	51,000	S
Postsecondary teachers, engineering	72,400	73,000	S	S	S	S	S	S	S
Non-S&E occupations	82,000	69,000	47,000	100,000	55,000	74,900	90,000	61,000	116,000
Top/mid-level managers, administrators, etc	100,000	92,000	72,000	110,000	75,000	86,600	98,500	65,000	120,000
Health and related occupations	80,000	58,600	S	104,000	100,000	72,000	71,000	60,000	S
Teachers, except S&E postsecondary teachers	57,000	60,000	40,000	S	S	S	S	S	S
Social services and related occupations	41,000	43,000	51,000	S	S	35,000	S	46,000	S
Technicians/technologists	71,500	47,000	S	75,000	90,000	78,000	70,000	50,000	S
Sales and marketing occupations	75,000	S	S	80,000	50,000	S	S	S	S
Other non-S&E occupations	57,000	38,000	S	78,000	30,000	51,000	64,000	55,000	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 65. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 1999

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Employment sector/occupation	Total	Male	Female
All sectors	$70,000	$75,000	$57,000
Scientists	64,700	68,000	55,000
Computer and information scientists	80,000	80,000	70,000
Mathematical scientists	61,000	63,000	57,000
Life and related scientists	61,000	65,000	52,000
Physical and related scientists	70,000	71,000	61,000
Social scientists	60,000	62,000	53,000
Psychologists	58,700	62,000	52,000
Engineers	80,000	80,000	72,000
Non-S&E occupations	82,000	90,700	61,000
University and 4-year colleges	60,000	63,000	50,000
Scientists	55,600	60,000	48,000
Computer and information scientists	64,000	65,000	58,000
Mathematical scientists	55,000	56,000	50,000
Life and related scientists	56,000	60,000	45,500
Physical and related scientists	56,000	58,000	48,000
Social scientists	55,500	59,900	50,000
Psychologists	52,000	57,800	48,000
Engineers	72,800	74,000	60,500
Non-S&E occupations	69,000	79,000	55,800
Other educational institutions	49,500	50,000	45,000
Scientists	50,000	50,000	46,000
Computer and information scientists	S	S	S
Mathematical scientists	52,000	50,000	S
Life and related scientists	45,500	46,000	45,000
Physical and related scientists	47,800	48,000	S
Social scientists	47,000	50,000	45,000
Psychologists	52,000	57,000	49,000
Engineers	S	S	S
Non-S&E occupations	47,000	50,000	45,000
Private-for-profit	85,000	87,000	74,000
Scientists	80,000	82,200	70,000
Computer and information scientists	85,000	85,000	79,000
Mathematical scientists	89,000	90,000	75,000
Life and related scientists	76,000	80,000	69,000
Physical and related scientists	80,000	80,000	72,000
Social scientists	90,000	100,000	75,000
Psychologists	70,000	75,000	60,000
Engineers	82,000	83,000	75,000
Non-S&E occupations	100,000	103,000	83,000
Self-employed	75,000	80,000	60,000
Scientists	75,000	80,000	66,000
Computer and information scientists	80,000	87,000	S
Mathematical scientists	S	S	S
Life and related scientists	50,000	60,000	30,000
Physical and related scientists	70,000	70,000	S
Social scientists	80,000	90,000	S
Psychologists	75,000	80,000	70,000
Engineers	100,000	100,000	S
Non-S&E occupations	55,000	60,000	40,000

See explanatory information and SOURCE at end of table.

Table 65. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 1999

Employment sector/occupation	Total	Male	Female
Private not-for-profit	$70,000	$73,000	$60,000
Scientists	65,000	70,000	55,000
Computer and information scientists	75,000	75,000	S
Mathematical scientists	83,200	85,000	S
Life and related scientists	57,100	65,000	46,100
Physical and related scientists	80,000	80,000	74,000
Social scientists	75,000	72,000	76,000
Psychologists	54,000	57,000	50,000
Engineers	83,700	83,700	S
Non-S&E occupations	74,900	80,000	65,000
Federal Government	76,000	79,000	68,100
Scientists	73,700	75,300	66,000
Computer and information scientists	78,000	78,000	S
Mathematical scientists	71,000	75,000	65,000
Life and related scientists	68,100	70,000	65,000
Physical and related scientists	80,000	80,000	68,500
Social scientists	78,000	78,200	75,000
Psychologists	67,000	70,000	62,600
Engineers	80,000	80,000	73,500
Non-S&E occupations	90,000	94,000	79,600
State and local government	57,000	59,000	55,000
Scientists	55,000	55,000	54,000
Computer and information scientists	49,300	S	S
Mathematical scientists	S	S	S
Life and related scientists	50,000	50,000	54,000
Physical and related scientists	53,000	53,000	S
Social scientists	53,100	54,000	49,000
Psychologists	56,000	56,000	56,000
Engineers	59,000	60,000	S
Non-S&E occupations	61,000	64,000	55,000
Other sector	100,000	110,000	100,000
Scientists	106,000	110,000	87,000
Computer and information scientists	S	S	S
Mathematical scientists	S	S	S
Life and related scientists	S	S	S
Physical and related scientists	S	S	S
Social scientists	110,000	115,000	S
Psychologists	S	S	S
Engineers	S	S	S
Non-S&E occupations	116,000	118,000	S

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&E=science and engineering.

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 66. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1999

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Employment sector/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
All sectors	$70,000	$70,000	$60,000	$70,000	$62,400	$61,000
Scientists	64,700	65,000	55,000	62,000	60,000	56,000
Computer and information scientists	80,000	80,000	63,000	76,000	86,000	S
Mathematical scientists	61,000	63,000	61,000	58,000	55,000	S
Life and related scientists	61,000	64,000	49,000	52,000	60,000	56,000
Physical and related scientists	70,000	71,000	62,000	65,100	67,000	61,000
Social scientists	60,000	60,000	54,000	59,000	57,000	53,000
Psychologists	58,700	60,000	52,000	50,000	50,900	55,000
Engineers	80,000	80,000	72,000	78,000	68,400	S
Non-S&E occupations	82,000	83,000	67,000	84,000	74,000	68,000
University and 4-year colleges	60,000	60,000	55,000	52,000	53,000	53,000
Scientists	55,600	58,000	51,000	48,000	50,400	53,000
Computer and information scientists	64,000	65,000	S	61,000	S	S
Mathematical scientists	55,000	56,700	S	49,500	52,400	S
Life and related scientists	56,000	60,000	43,300	40,000	47,000	S
Physical and related scientists	56,000	57,700	42,900	50,000	55,000	55,000
Social scientists	55,500	56,000	53,000	51,000	52,500	53,000
Psychologists	52,000	53,000	52,000	47,000	48,000	S
Engineers	72,800	74,000	65,000	73,000	61,000	S
Non-S&E occupations	69,000	70,000	64,000	55,900	57,000	S
Other educational institutions	49,500	49,800	47,500	50,000	52,000	S
Scientists	50,000	50,000	48,000	50,000	S	S
Computer and information scientists	S	S	S	S	S	S
Mathematical scientists	52,000	54,600	S	S	S	S
Life and related scientists	45,500	46,000	S	S	S	S
Physical and related scientists	47,800	48,000	S	S	S	S
Social scientists	47,000	48,000	S	S	S	S
Psychologists	52,000	52,500	S	S	S	S
Engineers	S	S	S	S	S	S
Non-S&E occupations	47,000	47,000	45,000	40,000	S	S
Private-for-profit	85,000	88,000	77,000	80,000	83,000	85,000
Scientists	80,000	83,000	75,000	74,500	76,000	S
Computer and information scientists	85,000	88,000	S	80,000	100,000	S
Mathematical scientists	89,000	94,000	S	77,000	S	S
Life and related scientists	76,000	80,000	70,000	70,000	75,000	S
Physical and related scientists	80,000	83,000	73,500	70,000	70,000	S
Social scientists	90,000	94,000	S	69,000	S	S
Psychologists	70,000	70,000	S	60,000	71,500	S
Engineers	82,000	84,000	75,000	80,000	83,000	S
Non-S&E occupations	100,000	101,000	90,000	93,000	110,000	S
Self-employed	75,000	72,000	96,000	75,000	72,000	S
Scientists	75,000	75,000	96,000	56,000	S	S
Computer and information scientists	80,000	87,000	S	S	S	S
Mathematical scientists	S	S	S	S	S	S
Life and related scientists	50,000	50,000	S	S	S	S
Physical and related scientists	70,000	70,000	S	S	S	S
Social scientists	80,000	80,000	S	S	S	S
Psychologists	75,000	75,000	96,000	S	S	S
Engineers	100,000	103,500	S	100,000	S	S
Non-S&E occupations	55,000	50,000	S	60,000	S	S

See explanatory information and SOURCE at end of table.

Table 66. Median annual salaries of full-time employed doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1999

Page 2 of 2

Employment sector/occupation	Total	White[1]	Black	Asian or Pacific Islander	Hispanic	American Indian/Alaskan Native
Private not-for-profit	$70,000	$71,000	$59,500	$63,900	$64,600	S
Scientists	65,000	66,500	57,000	55,300	60,000	S
Computer and information scientists	75,000	80,000	S	72,500	S	S
Mathematical scientists	83,200	85,000	S	S	S	S
Life and related scientists	57,100	65,000	S	30,000	S	S
Physical and related scientists	80,000	80,000	S	60,400	S	S
Social scientists	75,000	78,600	S	63,900	S	S
Psychologists	54,000	55,000	S	S	S	S
Engineers	83,700	88,000	S	76,000	S	S
Non-S&E occupations	74,900	75,000	62,000	66,000	S	S
Federal Government	76,000	77,700	73,000	70,000	75,000	S
Scientists	73,700	75,000	67,000	67,500	73,000	S
Computer and information scientists	78,000	78,000	S	S	S	S
Mathematical scientists	71,000	71,000	S	69,600	S	S
Life and related scientists	68,100	70,000	S	59,000	S	S
Physical and related scientists	80,000	80,000	S	70,000	85,000	S
Social scientists	78,000	78,200	S	S	S	S
Psychologists	67,000	67,000	S	S	S	S
Engineers	80,000	80,500	S	73,500	S	S
Non-S&E occupations	90,000	90,000	80,000	90,000	S	S
State and local government	57,000	57,500	57,000	52,000	62,000	S
Scientists	55,000	55,000	51,000	46,000	60,000	S
Computer and information scientists	49,300	S	S	S	S	S
Mathematical scientists	S	S	S	S	S	S
Life and related scientists	50,000	51,000	S	S	S	S
Physical and related scientists	53,000	57,100	S	46,000	S	S
Social scientists	53,100	52,500	S	S	S	S
Psychologists	56,000	56,000	51,000	S	S	S
Engineers	59,000	66,000	S	52,000	S	S
Non-S&E occupations	61,000	61,000	69,400	60,000	S	S
Other sector	100,000	110,000	S	99,000	S	S
Scientists	106,000	110,000	S	99,000	S	S
Computer and information scientists	S	S	S	S	S	S
Mathematical scientists	S	S	S	S	S	S
Life and related scientists	S	S	S	S	S	S
Physical and related scientists	S	S	S	S	S	S
Social scientists	110,000	120,000	S	99,000	S	S
Psychologists	S	S	S	S	S	S
Engineers	S	S	S	S	S	S
Non-S&E occupations	116,000	116,000	S	S	S	S

[1] 'Other' race included with 'white'.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&E=science and engineering

NOTE: The race/ethnicity data shown are for all doctoral recipients, including temporary residents. Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 67. Median annual salaries of full-time employed doctoral scientists and engineers, by occupation and primary or secondary work activity: 1999

Occupation	Total	R&D[1]	Teaching	Management, sales, and administration	Computer applications	Professional services	Other activities
All occupations	$70,000	$70,400	$58,000	$80,000	$71,600	$68,000	$60,000
Scientists	64,700	65,000	56,000	71,800	70,000	64,000	58,000
Computer and mathematical scientists	80,000	81,500	63,500	86,000	79,000	80,000	62,000
Computer/information scientists	82,000	85,000	65,000	90,000	80,000	80,000	65,000
Postsecondary teachers, computer sciences	64,900	68,000	63,000	68,300	58,000	S	55,000
Mathematical scientists	61,000	63,000	54,600	75,000	67,000	72,000	64,000
Mathematical scientists	78,000	75,000	84,000	92,000	71,700	85,000	S
Postsecondary teachers, math sciences	55,000	56,000	54,000	61,000	50,000	59,000	60,000
Life and related scientists	61,000	62,000	58,500	70,000	48,000	72,000	60,000
Agricultural scientists	65,800	65,000	50,000	75,000	60,000	72,000	64,000
Biological scientists	61,000	60,000	56,000	71,000	45,000	72,300	70,000
Forestry and conservation scientists	61,000	63,000	S	56,500	S	S	S
Postsecondary teachers, life & related sciences	60,000	62,000	59,000	67,000	48,600	71,000	51,000
Physical and related scientists	70,000	72,000	55,000	76,500	65,000	75,000	59,900
Chemists, except biochemistry	75,000	75,600	48,000	80,000	68,500	75,400	56,100
Earth scientists	75,000	74,500	50,000	81,000	67,000	74,000	74,000
Physics and astronomers	80,000	79,900	60,000	90,000	70,000	94,000	81,000
Other physical scientists	74,000	75,000	S	76,000	75,000	S	S
Postsecondary teachers, physical & related sciences	56,000	60,000	55,000	58,000	50,000	62,000	50,000
Social scientists	60,000	60,000	55,000	75,000	60,000	70,900	53,600
Economists	89,000	84,000	75,000	100,000	76,400	100,000	82,000
Political scientists	75,000	75,000	S	79,000	S	S	S
Sociologists and anthropologists	55,900	55,000	46,400	69,200	50,000	59,000	S
S&T historians and other social scientists	60,000	60,000	S	67,000	46,000	58,000	S
Postsecondary teachers, social & related sciences	55,000	55,000	55,000	64,000	55,000	58,000	50,000
Psychologists	58,700	57,000	53,000	60,000	55,000	60,000	57,000
Psychologists	60,000	61,500	60,000	60,500	62,000	60,000	57,000
Postsecondary teachers, psychology	52,000	54,000	52,000	56,000	50,000	51,000	52,000
Engineers	80,000	80,000	72,000	87,000	77,000	80,000	75,000
Aerospace/aeronautical engineers	83,700	84,300	S	91,000	79,000	S	S
Chemical engineers	80,000	80,000	S	85,500	80,000	S	81,000
Civil and architectural engineers	70,000	68,600	72,000	80,000	68,000	76,000	S
Electrical and related engineers	86,000	86,000	80,000	96,000	84,000	90,000	86,000
Materials/metallurgical engineers	84,800	84,800	S	90,000	85,000	S	S
Mechanical engineers	75,000	75,000	60,000	82,000	70,000	S	75,000
Other engineers	78,700	79,000	73,000	85,000	77,000	78,000	75,000
Postsecondary teachers, engineering	72,400	74,000	72,000	84,000	61,800	S	S
Non-S&E occupations	82,000	83,500	58,000	94,000	70,200	80,000	59,000
Top/mid-level managers, administrators, etc	100,000	105,000	81,500	100,000	90,000	87,000	93,000
Health and related occupations	80,000	80,000	80,000	87,000	71,500	91,000	59,300
Teachers, except S&E postsecondary teachers	57,000	60,000	55,000	60,000	46,000	55,800	56,000
Social services and related occupations	41,000	38,900	46,300	40,000	S	42,000	38,000
Technicians/technologists	71,500	73,400	47,000	80,000	70,000	S	62,000
Sales and marketing occupations	75,000	92,000	S	75,000	90,000	60,000	45,000
Other non-S&E occupations	57,000	59,000	40,000	62,000	50,000	80,000	36,000

[1] R&D includes basic or applied research, development and design.

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases). S&T=science and technology. S&E=science and engineering.

NOTE: Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

Table 68. Median annual salaries of full-time employed doctoral scientists and engineers, by employer location and broad occupation: 1999

Page 1 of 2

Employer location	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
All locations	$70,000	$64,700	$80,000	$61,000	$61,000	$70,000	$60,000	$58,700	$80,000	$82,000
New England	70,000	65,000	81,000	65,000	57,000	71,000	65,000	57,500	78,400	84,600
Connecticut	78,000	73,400	80,000	S	73,000	80,000	75,000	64,000	80,000	100,000
Maine	60,000	52,000	S	S	45,500	52,000	54,000	65,000	S	65,000
Massachusetts	70,000	65,000	85,000	63,000	57,000	71,000	68,300	55,000	79,000	83,000
New Hampshire	62,000	57,000	80,000	S	42,500	46,600	S	52,000	75,000	82,000
Rhode Island	65,000	57,000	S	S	46,000	80,200	57,000	52,000	74,000	66,000
Vermont	55,000	47,000	S	S	51,000	S	44,500	41,500	85,000	60,000
Middle Atlantic	75,000	69,000	85,000	68,300	66,800	73,500	64,000	60,000	82,000	90,000
New Jersey	84,000	80,000	90,000	82,500	76,000	80,000	75,000	70,000	89,000	101,000
New York	72,000	65,000	85,000	65,000	61,000	73,000	60,000	60,000	81,000	90,000
Pennsylvania	68,800	64,000	66,500	63,000	64,000	67,000	65,500	59,000	77,600	80,000
East North Central	67,000	61,000	68,300	60,000	61,000	65,000	58,000	55,000	75,000	75,000
Illinois	69,000	65,000	75,000	63,000	62,000	65,000	64,000	56,000	75,000	75,000
Indiana	64,900	60,000	54,000	45,000	62,500	70,000	58,500	60,000	68,000	88,000
Michigan	70,600	62,000	68,000	68,000	61,000	63,100	60,000	57,000	80,000	80,000
Ohio	65,000	60,000	65,000	65,000	63,000	65,000	53,000	53,000	70,000	73,000
Wisconsin	60,000	55,000	62,000	S	55,000	68,000	53,000	50,000	68,000	64,000
West North Central	60,000	56,000	71,000	51,000	60,000	59,000	50,000	53,300	74,000	72,000
Iowa	58,900	54,000	S	51,000	60,000	42,000	54,000	52,000	65,000	67,000
Kansas	53,000	50,000	S	S	52,000	48,500	47,500	55,000	72,400	52,000
Minnesota	67,000	60,000	82,300	70,000	60,000	67,000	52,000	56,000	78,000	84,000
Missouri	62,000	55,000	72,000	53,500	58,000	55,000	55,000	46,000	78,300	80,000
Nebraska	54,000	55,000	S	S	60,000	S	S	60,000	S	S
North Dakota	60,000	61,000	S	S	66,000	61,000	S	60,000	S	60,000
South Dakota	50,000	48,000	S	S	51,000	S	S	S	S	50,000
South Atlantic	71,000	66,000	75,000	66,000	64,600	70,000	66,000	60,000	80,000	82,000
Delaware	85,000	84,400	68,000	S	88,000	89,000	S	S	90,400	87,000
District of Columbia	85,000	80,000	73,000	69,600	67,000	82,000	89,000	65,000	90,000	95,200
Florida	60,000	55,000	62,000	48,000	58,000	59,000	50,000	55,000	70,000	71,000
Georgia	65,000	60,000	80,000	53,500	60,000	59,400	50,000	56,000	82,000	71,000
Maryland	73,500	69,000	70,000	73,300	65,000	75,400	62,000	56,000	89,000	87,000
North Carolina	70,000	65,000	77,000	60,000	70,000	61,000	56,000	56,000	75,000	81,000
South Carolina	60,000	59,000	S	S	55,000	66,000	47,500	55,000	73,000	65,000
Virginia	75,000	69,000	87,700	78,600	64,000	70,000	60,000	65,000	84,500	85,000
West Virginia	69,000	65,000	S	S	60,000	72,000	72,000	S	75,000	72,000

See explanatory information and SOURCE at end of table.

Table 68. Median annual salaries of full-time employed doctoral scientists and engineers, by employer location and broad occupation: 1999

Page 2 of 2

Employer location	Total	Scientists	Computer and information scientists	Mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Psychologists	Engineers	Non-S&E occupations
East South Central	$63,000	$58,000	$65,000	$50,100	$57,500	$64,000	$50,000	$63,000	$70,000	$78,000
Alabama	68,000	60,000	S	59,400	60,000	68,000	50,000	50,000	74,500	90,000
Kentucky	57,200	55,000	S	60,000	54,000	63,000	47,000	65,000	S	61,200
Mississippi	62,000	60,000	S	S	60,000	61,000	S	S	75,000	75,000
Tennessee	65,000	59,000	59,000	S	55,000	65,000	53,000	65,000	66,000	78,000
West South Central	68,700	62,000	75,000	50,000	60,000	72,000	58,000	56,000	80,000	80,000
Arkansas	57,000	55,000	S	S	55,000	70,200	50,000	54,300	S	85,000
Louisiana	65,000	62,000	S	50,000	61,000	68,000	56,000	50,500	76,000	70,000
Oklahoma	56,000	55,000	S	S	62,000	58,000	55,000	55,000	60,000	58,500
Texas	70,900	65,000	79,000	52,000	60,000	76,000	58,400	57,000	80,000	80,000
Mountain	66,000	60,000	76,000	60,000	55,000	73,000	51,000	54,500	79,000	74,000
Arizona	65,000	60,000	80,000	S	55,000	70,000	50,000	65,000	74,000	62,000
Colorado	64,600	60,000	83,000	54,000	56,000	65,000	53,000	55,000	79,000	80,000
Idaho	66,000	55,000	S	S	46,000	66,000	S	S	75,000	78,000
Montana	50,400	50,000	S	S	43,000	S	S	S	S	S
New Mexico	78,000	74,000	76,000	S	59,000	82,000	42,000	45,000	82,000	85,000
Nevada	75,000	75,000	S	S	S	80,000	S	90,000	70,500	85,200
Utah	62,000	55,000	80,000	S	55,000	51,000	55,000	47,000	74,000	72,000
Wyoming	52,000	52,000	S	S	S	65,000	S	S	S	S
Pacific	75,000	68,300	85,000	60,500	64,000	73,000	61,000	62,000	83,400	90,000
Alaska	61,000	59,000	S	S	56,000	61,000	S	S	S	S
California	80,000	72,500	90,000	61,000	68,000	75,000	65,400	65,000	85,000	98,000
Hawaii	60,000	60,000	S	S	60,000	72,300	59,000	S	S	56,000
Oregon	62,000	59,000	70,000	S	53,000	62,000	57,000	50,000	72,000	66,000
Washington	62,400	58,500	64,000	60,000	56,000	60,500	54,000	57,000	75,000	73,000
Puerto Rico	48,000	42,000	S	S	42,000	S	S	S	S	65,000
Other U.S. territories and other areas	69,000	70,000	S	S	S	S	S	S	S	63,000

KEY: S=Suppressed due to too few cases (fewer than 200 weighted cases).

NOTES: Since the survey sample design does not include geography, the reliability of estimates in some states may be poor due to small sample size.
Salaries are rounded to nearest hundred.

SOURCE: National Science Foundation/Division of Science Resources Statistics, 1999 Survey of Doctorate Recipients

APPENDIX A.
DEGREE FIELD LIST

APPENDIX A. DEGREE FIELD LIST

SED/DRF Code	Field Name	SDR Code
COMPUTER AND INFORMATION SCIENCES		
400	Computer sciences	D671-677
410	Information sciences & systems	D671-677
MATHEMATICAL SCIENCES		
420	Applied mathematics	841
498	Mathematics, general	842
465	Operations research	843
450	Statistics	844
425	Algebra	845
430	Analysis & functional analysis	845
435	Geometry	845
440	Logic	845
445	Number theory	845
455	Topology	845
460	Computing theory & practice	845
499	Mathematics, other	845
BIOLOGICAL AND AGRICUTURAL SCIENCES		
	Agricultural and food sciences	
005	Animal breading & genetics	605
007	Animal husbandry	605
010	Animal nutrition	605
012	Dairy science	605
014	Poultry science	605
019	Animal sciences, other	605
040	Food sciences	606
042	Food distribution	606
043	Food engineering	606
044	Food sciences, other	606
020	Agronomy	607
025	Plant breeding & genetics	607
030	Plant pathology	607
032	Plant protect. & pest management	607
039	Plant sciences, other	607
050	Horticulture science	607

SED/DRF Code	Field Name	SDR Code
	Agricultural and food sciences (continued)	
045	Soil sciences	608
046	Soil chemistry & microbiology	608
049	Soil sciences, other	608
099	Agricultural sciences, other	608
098	Agriculture, general	608
	Biological sciences	
100	Biochemistry	631
103	Biomedical sciences	642
105	Biophysics	631
198	Biological sciences, general	632
120	Plant pathology	633
125	Plant physiology	633
129	Botany, other	633
136	Cell biology	634
154	Molecular biology	634
139	Ecology	635
115	Plant genetics	636
170	Genetics, human & animal	636
171	Genetics	636
156	Microbiology & bacteriology	637
157	Microbiology	637
110	Bacteriology	637
163	Nutritional sciences	638
180	Pharmacology, human & animal	639
185	Physiology, human & animal	640
186	Physiology, animal & plant	640
148	Entomology	641
175	Pathology, human & animal	641
189	Zoology	641
107	Biotechnology research	642
133	Biometrics & biostatistics	642
130	Anatomy	642
140	Hydrobiology	642
142	Developmental biology	642
145	Endocrinology	642
151	Immunology	642
160	Neurosciences	642
166	Parasitology	642
169	Toxicology	642
199	Biological sciences, other	642

SED/DRF Code	Field Name	SDR Code
Environmental life sciences, including forestry sciences		
580	Environmental sciences	680
055	Fisheries sciences	680
054	Fish & wildlife	680
060	Wildlife	681
065	Forestry science	681
066	Forest biology	681
068	Forest engineering	681
070	Forest management	681
072	Wood science	681
074	Renewable natural resources	681
079	Forestry & related sciences, other	681
080	Wildlife/range management	681
HEALTH SCIENCES		
200	Audiology & speech pathology	781
212	Health systems & services administration	782
225	Medicine & surgery	786
205	Dentistry	786
235	Optometry/opthamology	786
250	Veterinary medicine	786
230	Nursing	787
240	Pharmacy	788
245	Rehabilitation & therapeutic services	789
220	Epidemiology	790
215	Public health	790
210	Environmental health	790
219	Public health & epidemiology	790
222	Exercise physiology & kinesiology	791
224	Hospital administration	791
299	Health sciences, other	791
298	Health sciences, general	791
PHYSICAL AND RELATED SCIENCES		
	Chemistry, except biochemistry	
526	Organic	873
528	Pharmaceutical	873
530	Physical	873
532	Polymer	873
534	Theoretical	873
538	Chemistry, general	873
539	Chemistry, other	873

SED/DRF Code	Field Name	SDR Code
	Chemistry, except biochemistry (continued)	
524	Nuclear	873
520	Analytical	873
522	Inorganic	873
521	Agriculture and food	873
	Earth, atmospheric and ocean sciences	
514	Meteorology	872
518	Atmospheric/meterological sciences, general	872
519	Atmospheric/meterological sciences, other	872
512	Atmospheric dynamics	872
510	Atmospheric physics & chemistry	872
540	Geology	875
548	Mineralogy, petrology	875
549	Mineralogy/petrology/geochemistry	875
550	Stratigraphy/sedimentation	875
552	Geomorphol, glacial geology	875
554	Applied geology	875
555	Applied geology, geology engineering	875
547	Fuel technology, petroleum engineering	876
558	Geological sciences, General	876
559	Geological sciences, Other	876
546	Paleontology	876
545	Geophysics	876
544	Geophysics & seismology	876
542	Geochemistry	876
590	Oceanography	877
585	Hydrology & water resources	D879
595	Marine sciences	D879
599	Misc. physical sciences, other	D879
	Physics and astronomy	
500	Astronomy	871
505	Astrophysics	871
506	Astronomy & astrophysics	871
566	Fluids	878
567	Mechanics	878
568	Nuclear	878
569	Optics	878
570	Plasma	878
572	Polymer	878
573	Thermal	878
574	Solid state	878
575	Theoretical	878
578	Physics, general	878

SED/DRF Code	Field Name	SDR Code
	Physics and astronomy (continued)	
579	Physics, other	878
563	Electromagnetism	878
564	Elementary particles	878
560	Acoustics	878
561	Atomic & nuclear	878
562	Electronic physics	878
SOCIAL AND RELATED SCIENCES		
	Economics	
666	Economics	923
668	Econometrics	923
000	Agricultural economics	601
	Political science and related sciences	
682	Public policy studies	902
674	International relations	927
679	Political science/public administration	928
678	Political sciences & government	928
	Sociology and anthropology	
773	Archeology	921
650	Anthropology	921
658	Criminology	922
686	Sociology	929
	Other social sciences	
652	Area studies	620
670	Geography	924
710	History of science	925
729	Linguistics	771
694	Urban studies	930
698	Social sciences, general	930
699	Social sciences, other	930
662	Demography	930
690	Social statistics	930
PSYCHOLOGY		
618	Educational	704
600	Clinical	891
609	Counseling	892
615	Experimental	893

SED/DRF Code	Field Name	SDR Code
PSYCHOLOGY (continued)		
620	Family & marriage counseling	897
613	Human/individual & family development	897
648	Psychology, general	894
621	Industrial & organization	895
639	Social	896
619	Human engineering	897
624	Personality	897
627	Physiological/psychobiology	897
630	Psychometrics	897
633	Quantitative	897
636	School	897
616	Experimental/comparative/physiological	897
612	Developmental & child	897
649	Psychology, other	897
606	Comparative	897
603	Cognitive & psycholinguistics	897
ENGINEERING		
	Aerospace/aeronautical engineering	
300	Aerospace/aeronaut/astronautical	721
	Chemical Engineering	
312	Chemical	725
	Civil engineering	
315	Civil	726
	Electrical & computer engineering	
372	Systems	727
321	Computer	727
324	Electrical/electronics	728
323	Electronics	728
322	Electrical	728
318	Communications	728
	Materials/metallurgical engineering	
342	Materials science	734
348	Metallurgical	736

SED/DRF Code	Field Name	SDR Code
	Mechanical engineering	
345	Mechanical	735
	Other engineering	
303	Agricultural	722
306	Bioengineering & biomedical	724
327	Engineering mechanics	729
330	Engineering physics	729
333	Engineering science	729
336	Environmental health engineering	730
398	Engineering, general	731
339	Industrial	733
309	Ceramic	734
369	Polymer	734
375	Textile	734
351	Mining & mineral	737
354	Naval architectural & marine engineering	738
357	Nuclear	739
366	Petroleum	740
360	Ocean	D741
363	Operations research (Engineering)	D741
399	Engineering, other	D741

APPENDIX B.
OCCUPATION FIELD LIST

APPENDIX B. OCCUPATION FIELD LIST

COMPUTER AND INFORMATION SCIENCES

Computer and information sciences

520	Computer systems analysts
530	Computer sciences, except systems analysts
540	Information systems sciences & analysts
550	Other computer & information science occupations
880	Computer engineers - software

Postsecondary teachers, computer sciences

276	Postsecondary teachers – Computer sciences

MATHEMATICAL SCIENCES

Mathematical sciences

172	Mathematicians
173	Operations research analysts, modeling
174	Statisticians
176	Other mathematical sciences

Postsecondary teachers, math sciences

286	Postsecondary teachers - Math sciences

LIFE AND RELATED SCIENCES

Agricultural sciences

210	Agricultural & food sciences

Biological sciences

022	Biochemists & biophysicists
023	Biological sciences
025	Medical sciences, except practitioners
027	Other biological & life sciences

Forestry and conservation sciences

024	Forestry & conservation sciences

Postsecondary teachers, life & related sciences

271	Postsecondary teachers - Agriculture
273	Postsecondary teachers - Biological sciences
287	Postsecondary teachers - Medical science
297	Other postsecondary teachers - Natural sciences

PHYSICAL AND RELATED SCIENCES

Chemists, except biochemistry
193 Chemists, except biochemistry

Earth sciences
192 Atmospheric & space sciences
194 Geologists, including earth sciences
195 Oceanographers

Physicists and astronomers
191 Astronomer
196 Physicists

Other physical sciences
198 Other physical & related sciences

Postsecondary teachers, physical & related sciences
275 Postsecondary teachers - Chemistry
277 Postsecondary teachers - Earth, environmental & marine science
289 Postsecondary teachers - Physics

SOCIAL AND RELATED SCIENCES

Economists
232 Economists

Political sciences
235 Political sciences

Sociologists and anthropologists
231 Anthropologists
237 Sociologists

S&T historians and other social sciences
233 Historians, science & technology
238 Other social sciences

Postsecondary teachers in Social & related sciences
278 Postsecondary teachers - Economics
290 Postsecondary teachers - Politics
293 Postsecondary teachers - Sociology
298 Postsecondary teachers - Other social sciences

PSYCHOLOGISTS

Psychologists
236 Psychologists, including clinical psychologists

Postsecondary teachers, psychology
291 Postsecondary teachers - Psychology

ENGINEERS

Aerospace & aeronautical engineers
082 Aeronautical, aerospace & astronautical engineers

Chemical engineers
085 Chemical engineers

Civil and architectural engineers
086 Civil engineers, including architectural and sanitary

Electrical and related engineers
087 Computer engineers - Hardware
089 Electrical & electronics engineers

Materials/metallurgical engineers
093 Materials & metallurgical engineers

Mechanical engineers
094 Mechanical engineers

Other engineers
083 Agricultural engineers
084 Bioengineering & biomedical engineers
090 Environmental engineers
091 Industrial engineers
092 Marine engineers & naval architects
095 Mining & geological engineers
096 Nuclear engineers
097 Petroleum engineers
098 Sales engineers
099 Other engineers

Postsecondary teachers, engineering
280 Postsecondary teachers - Engineering

NON-S&E OCCUPATIONS

Top/mid-level managers, administrators, etc.

141 Top & mid-level managers, executives, administrators
151 Accountants, auditors, & other financial specialists
152 Personnel, training & labor relations specialists
153 Other management related occupations

Health and related occupations

111 Diagnosing & treating health practitioners
112 Registered nurses, pharmacists, dieticians, therapists, etc.
113 Health technologists & technicians
114 Other health occupations

Teachers, except S&E postsecondary teachers

251 Teachers, pre-kindergarten & kindergarten
252 Teachers, elementary school
253 Teachers, secondary - Computer, math or science
254 Teachers, secondary - Social sciences
255 Teachers, secondary - Other subjects
256 Teachers, special education
257 Teachers, other precollegiate education
272 Postsecondary teachers - Art, drama, and music
274 Postsecondary teachers - Business commerce and marketing
279 Postsecondary teachers - Education
281 Postsecondary teachers - English
282 Postsecondary teachers - Foreign language
283 Postsecondary teachers - History
284 Postsecondary teachers - Home economics
285 Postsecondary teachers - Law
288 Postsecondary teachers - Physical education
292 Postsecondary teachers - Social work
294 Postsecondary teachers - Theology
295 Postsecondary teachers - Trade & industrial
296 Postsecondary teachers - Other health specialties
299 Postsecondary teachers - Other non-science & engineering not listed above

Social service and related occupations

040 Clergy & other religious workers
070 Counselors, educational & vocational
240 Social workers

Technicians/technologists

026 Technologists/technicians in biology/life sciences
051 Computer programmers
100 Electrical, industrial, mechanical engineering technologist/technicians
101 Drafting occupations, including computer drafting

Technicians/technologists (continued)

102	Surveying & mapping engineering technicians
103	Other engineering technologists and technicians
104	Surveyors
175	Technologists/technicians In mathematical sciences
197	Technologists/technicians In physical sciences

Sales and marketing occupations

200	Sales/marketing-Insurance, securities, real estate & business services
201	Sales occupations - Commodities, except retail
202	Sales occupations - Retail
203	Other marketing & sales occupations

Other non-S&E occupations

010	Artists, broadcasters, editors, entertainers, public relations specialists, writers
031	Accounting clerks & bookkeepers
032	Secretaries, receptionists & typists
033	Other administrative
081	Architects
110	Farmers, foresters, & fishermen
120	Lawyers & judges
130	Librarians, archivists & curators
171	Actuaries
221	Food preparation & service Workers
222	Protective service workers
223	Other service occupations, except health
234	Historians, except science & technology
401	Construction trades, miners & well drillers
402	Mechanics & repairers
403	Precision production occupations
404	Operators & related occupations
405	Transportation & material moving occupations
500	Other occupations
995	Other fields (Not Listed)

APPENDIX C.
1999 SDR GENERALIZED VARIANCE PARAMETERS

APPENDIX C. 1999 SDR GENERALIZED VARIANCE PARAMETERS

Listing of generalized variance parameters for selected demographic groups in science and engineering fields, 1999

Characteristic	Estimated parameters	
	'a'	'b'
Total doctorate recipients	-0.000029	19.1944
Female	-0.000111	17.1594
White	-0.000031	19.1348
Asian/Pacific Islander	-0.000124	19.0081
Black	-0.000078	12.0437
American Indian/Alaskan Native	-0.000077	11.2411
Hispanic origin	-0.000091	13.7747
1997-1998 Cohort	-0.000318	16.6560
Foreign born	-0.000143	20.6157
Total sciences	-0.000034	18.6669
Female	-0.000107	16.5345
White	-0.000033	17.7243
Asian/Pacific Islander	-0.000114	17.4199
Black	-0.000077	11.8137
American Indian/Alaskan Native	-0.000076	11.0396
Hispanic origin	-0.000080	12.2174
1997-1998 Cohort	-0.000296	15.5024
Foreign born	-0.000116	16.7450
Computer and math, total	-0.000387	16.1197
Female	-0.000216	9.0169
White	-0.000377	15.7252
Asian/Pacific Islander	-0.000373	15.5572
Black	-0.000243	10.1114
American Indian/Alaskan Native	-0.000070	2.9363
Hispanic origin	-0.000291	12.1190
1997-1998 Cohort	-0.000293	12.2027
Foreign born	-0.000326	13.5973
Computer and info sciences	-0.001488	17.3074
Female	-0.000556	6.4664
White	-0.001353	15.7453
Asian/Pacific Islander	-0.001276	14.8463
Black	-0.000930	10.8250
American Indian/Alaskan Native	-0.000103	1.1944
Hispanic origin	-0.000775	9.0175
1997-1998 Cohort	-0.000968	11.2664
Foreign born	-0.001080	12.5674
Mathematics	-0.000621	18.6410
Female	-0.000365	10.9742
White	-0.000596	17.8912
Asian/Pacific Islander	-0.000570	17.1089
Black	-0.000312	9.3738
American Indian/Alaskan Native	-0.000152	4.5548
Hispanic origin	-0.000414	12.4430
1997-1998 Cohort	-0.000448	13.4487
Foreign born	-0.000523	15.7002

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Listing of generalized variance parameters for selected demographic groups in science and engineering fields, 1999

Characteristic	Estimated parameters	
	'a'	'b'
Life and related sciences	-0.000092	16.8031
Female	-0.000085	13.0631
White	-0.000092	16.7667
Asian/Pacific Islander	-0.000108	16.5486
Black	-0.000073	11.2997
American Indian/Alaskan Native	-0.000065	9.5386
Hispanic origin	-0.000077	11.7273
1997-1998 Cohort	-0.000268	14.0430
Foreign born	-0.000107	15.5025
Agricultural and food sciences	-0.000647	18.9597
Female	-0.000407	11.9264
White	-0.000642	18.7980
Asian/Pacific Islander	-0.000549	16.0915
Black	-0.000588	17.2322
American Indian/Alaskan Native	-0.000384	11.2487
Hispanic origin	-0.000383	11.2355
1997-1998 Cohort	-0.000575	16.8516
Foreign born	-0.000617	18.0800
Biological sciences	-0.000122	18.7805
Female	-0.000085	13.0330
White	-0.000116	17.8880
Asian/Pacific Islander	-0.000106	16.2565
Black	-0.000065	9.9216
American Indian/Alaskan Native	-0.000070	10.2008
Hispanic origin	-0.000073	11.0613
1997-1998 Cohort	-0.000246	12.8491
Foreign born	-0.000098	14.1798
Environmental sciences	-0.000320	18.4994
Female	-0.000268	15.4872
White	-0.000324	18.7066
Asian/Pacific Islander	-0.000310	17.9330
Black	-0.000101	5.8395
American Indian/Alaskan Native	-0.000025	1.4279
Hispanic origin	-0.000340	19.6281
1997-1998 Cohort	-0.000266	13.9033
Foreign born	-0.000345	19.9186
Physical and related sciences	-0.000122	16.2227
Female	-0.000085	11.2722
White	-0.000115	15.3885
Asian/Pacific Islander	-0.000123	16.3333
Black	-0.000071	9.5265
American Indian/Alaskan Native	-0.000074	9.9248
Hispanic origin	-0.000081	10.8170
1997-1998 Cohort	-0.000251	13.1448
Foreign born	-0.000110	14.6629

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Listing of generalized variance parameters for selected demographic groups in science and engineering fields, 1999 (continued)

Characteristic	Estimated parameters	
	'a'	'b'
Chemistry (except biochemistry)	-0.000270	18.6260
Female	-0.000175	12.1027
White	-0.000246	16.9766
Asian/Pacific Islander	-0.000254	17.5263
Black	-0.000193	13.3236
American Indian/Alaskan Native	-0.000190	13.0827
Hispanic origin	-0.000171	11.8308
1997-1998 Cohort	-0.000263	13.7381
Foreign born	-0.000234	16.1322
Geology and oceanography	-0.000911	17.1844
Female	-0.000558	10.5211
White	-0.000907	17.1244
Asian/Pacific Islander	-0.000638	12.0426
Black	-0.000093	1.7510
American Indian/Alaskan Native	-0.000164	3.0948
Hispanic origin	-0.000466	8.7850
1997-1998 Cohort	-0.000628	11.8506
Foreign born	-0.000605	11.4216
Physics and astronomy	-0.000416	18.9019
Female	-0.000219	9.9396
White	-0.000396	17.9694
Asian/Pacific Islander	-0.000399	18.1299
Black	-0.000153	6.9539
American Indian/Alaskan Native	-0.000208	9.4312
Hispanic origin	-0.000265	12.0408
1997-1998 Cohort	-0.000306	13.9055
Foreign born	-0.000356	16.1520
Other physical sciences	-0.000271	17.4245
Female	-0.000229	14.7328
White	-0.000261	16.7837
Asian/Pacific Islander	-0.000306	19.6726
Black	-0.000189	12.1464
American Indian/Alaskan Native	-0.000060	3.8869
Hispanic origin	-0.000038	2.4416
1997-1998 Cohort	-0.000362	18.9346
Foreign born	-0.000281	18.0744
Social and related sciences	-0.000097	17.7956
Female	-0.000088	13.6458
White	-0.000099	18.0675
Asian/Pacific Islander	-0.000097	14.7768
Black	-0.000076	11.6748
American Indian/Alaskan Native	-0.000073	10.5969
Hispanic origin	-0.000071	10.7574
1997-1998 Cohort	-0.000261	13.6554
Foreign born	-0.000098	14.1223

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Listing of generalized variance parameters for selected demographic groups in science and engineering fields, 1999 (continued)

Characteristic	Estimated parameters	
	'a'	'b'
Economics	-0.001001	23.6079
Female	-0.000431	10.1746
White	-0.001008	23.7760
Asian/Pacific Islander	-0.000693	16.3337
Black	-0.000510	12.0380
American Indian/Alaskan Native	-0.000492	11.5913
Hispanic origin	-0.000516	12.1694
1997-1998 Cohort	-0.000558	13.1578
Foreign born	-0.000665	15.6735
Political science	-0.000649	24.4629
Female	-0.000416	15.7004
White	-0.000641	24.1830
Asian/Pacific Islander	-0.000462	17.4105
Black	-0.000378	14.2593
American Indian/Alaskan Native	-0.000088	3.3263
Hispanic origin	-0.000312	11.7628
1997-1998 Cohort	-0.000411	15.4824
Foreign born	-0.000500	18.8650
Psychology	-0.000207	19.7888
Female	-0.000154	14.7338
White	-0.000198	18.9378
Asian/Pacific Islander	-0.000154	14.6762
Black	-0.000150	14.3727
American Indian/Alaskan Native	-0.000117	11.1500
Hispanic origin	-0.000127	12.1382
1997-1998 Cohort	-0.000274	14.3559
Foreign born	-0.000148	14.1792
Sociology/archeology/anthropology	-0.000731	19.2146
Female	-0.000419	11.0165
White	-0.000743	19.5070
Asian/Pacific Islander	-0.000346	9.0857
Black	-0.000245	6.4430
American Indian/Alaskan Native	-0.000318	8.3488
Hispanic origin	-0.000273	7.1832
1997-1998 Cohort	-0.000389	10.2195
Foreign born	-0.000365	9.5809
Other social sciences	-0.000660	24.9019
Female	-0.000433	16.3273
White	-0.000703	26.5263
Asian/Pacific Islander	-0.000527	19.8583
Black	-0.000340	12.8303
American Indian/Alaskan Native	-0.000439	16.5403
Hispanic origin	-0.000283	10.6840
1997-1998 Cohort	-0.000442	16.6593
Foreign born	-0.000478	18.0125

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Listing of generalized variance parameters for selected demographic groups in science and engineering fields, 1999 (continued)

Characteristic	Estimated parameters	
	'a'	'b'
Total engineering	-0.000201	22.1870
Female	-0.000121	13.4116
White	-0.000185	20.4590
Asian/Pacific Islander	-0.000197	21.7245
Black	-0.000106	11.7202
American Indian/Alaskan Native	-0.000060	6.6702
Hispanic origin	-0.000141	15.5955
1997-1998 Cohort	-0.000275	14.3637
Foreign born	-0.000186	20.5511
Aerospace & astronautical engineering	-0.000273	22.8589
Female	-0.000167	14.0249
White	-0.000282	23.5973
Asian/Pacific Islander	-0.000298	24.9235
Black	-0.000154	12.8673
American Indian/Alaskan Native	-0.000041	3.4448
Hispanic origin	-0.000162	13.5843
1997-1998 Cohort	-0.000310	16.2190
Foreign born	-0.000307	25.6845
Chemical engineering	-0.000270	22.5820
Female	-0.000172	14.3758
White	-0.000264	22.1231
Asian/Pacific Islander	-0.000289	24.1972
Black	-0.000102	8.5382
American Indian/Alaskan Native	-0.000020	1.6377
Hispanic origin	-0.000185	15.5194
1997-1998 Cohort	-0.000315	16.4576
Foreign born	-0.000281	23.5015
Civil engineering	-0.000281	23.4941
Female	-0.000223	18.6459
White	-0.000266	22.2593
Asian/Pacific Islander	-0.000320	26.7761
Black	-0.000180	15.0963
American Indian/Alaskan Native	-0.000030	2.5276
Hispanic origin	-0.000244	20.4007
1997-1998 Cohort	-0.000343	17.9396
Foreign born	-0.000303	25.3851
Electrical, computer, communication engineering	-0.000824	22.0447
Female	-0.000287	7.6857
White	-0.000754	20.1889
Asian/Pacific Islander	-0.000653	17.4735
Black	-0.000280	7.4837
American Indian/Alaskan Native	-0.000307	8.2134
Hispanic origin	-0.000518	13.8537
1997-1998 Cohort	-0.000437	11.6826
Foreign born	-0.000653	17.4680

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Listing of generalized variance parameters for selected demographic groups in science and engineering fields, 1999 (continued)

Characteristic	Estimated parameters	
	'a'	
Industrial engineering	-0.000264	22.1185
Female	-0.000176	14.7088
White	-0.000272	22.7976
Asian/Pacific Islander	-0.000306	25.6134
Black	-0.000046	3.8130
American Indian/Alaskan Native	-0.000133	11.1416
Hispanic origin	-0.000054	4.5079
1997-1998 Cohort	-0.000304	15.9171
Foreign born	-0.000292	24.4793
Mechanical engineering	-0.000280	23.4645
Female	-0.000187	15.6826
White	-0.000267	22.3409
Asian/Pacific Islander	-0.000267	22.3945
Black	-0.000156	13.0311
American Indian/Alaskan Native	-0.000065	5.4592
Hispanic origin	-0.000225	18.8401
1997-1998 Cohort	-0.000304	15.8844
Foreign born	-0.000269	22.5284
Other engineering	-0.000268	22.4743
Female	-0.000195	16.3328
White	-0.000254	21.2894
American Indian/Alaskan Native	-0.000277	23.2145
Black	-0.000173	14.4852
American Indian/Alaskan Native	-0.000133	11.1573
Hispanic origin	-0.000208	17.3811
1997-1998 Cohort	-0.000300	15.6928
Foreign born	-0.000269	22.5317

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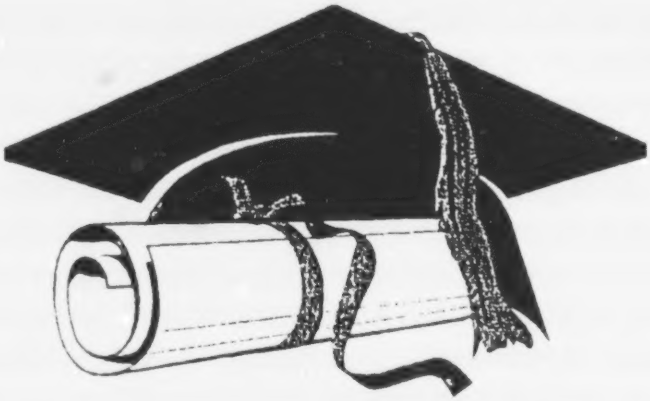
APPENDIX D.

1999 SURVEY OF DOCTORATE RECIPIENTS QUESTIONNAIRE

FORM SDR-1
(3-5-99)

OMB No. 3145-0020:
Approval Expires 04/30/2001



1999 Survey of Doctorate Recipients

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be treated as confidential and used only for research or statistical purposes by the survey sponsors (the National Science Foundation and the National Institutes of Health), their contractors, and collaborating researchers for the purpose of analyzing data and preparing scientific reports and articles. Any information publicly released (such as statistical summaries) will be in a form that does not personally identify you. Your response is voluntary and failure to provide some or all of the requested information will not in any way adversely affect you. Actual time to complete the questionnaire may vary depending on your circumstances. On the average, it will take about 25 minutes to complete the questionnaire. If you have any comments on the time required for this survey, please send them to Suzanne H. Plimpton, National Science Foundation, 4201 Wilson Boulevard, Suite 295, Arlington, VA 22230. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

Conducted by:

U.S. Department of Commerce
BUREAU OF THE CENSUS

for the
National Science Foundation
Arlington, VA

INSTRUCTIONS

Thank you for taking the time to complete this questionnaire. Directions for filling it out are provided with each question. Because not all questions will apply to everyone, you may be asked to skip certain questions.

- In order to get comparable data, we will be asking you to refer to the week of April 15, 1999 (e.g., April 11 – April 17, 1999) when answering most questions
- Follow all "SKIP" instructions AFTER marking a box. If no "SKIP" instruction is provided, you should continue to the NEXT question
- Either a pen or pencil may be used
- When answering questions that require marking a box, please use an "X"
- If you need to change an answer, please make sure that your old answer is either completely erased or clearly crossed out

Thanks again for your help, we really appreciate it.

FORM SDR-1 (3-5-99)

PART A – Employment Status During the Reference Week of April 11 – 17, 1999

A1. Were you working for pay (or profit) during the week of April 15, 1999? This includes a post-doctoral appointment, being self-employed or temporarily absent from a job even if unpaid (e.g., illness, vacation or parental leave).

1 ☐ Yes → ***SKIP to A7***
2 ☐ No

A2. *(IF NO)* **Did you look for work during the four weeks preceding April 15, 1999 (that is, anytime between March 19 and April 15, 1999)?**

1 ☐ Yes
2 ☐ No

A3. What were your reasons for not working during the week of April 15?

Mark (X) all that apply

Year Retired

1 ☐ Retired → 19 |
2 ☐ On layoff from a job
3 ☐ Student
4 ☐ Family responsibilities
5 ☐ Chronic illness or permanent disability
6 ☐ Suitable job not available
7 ☐ Did not need or want to work
8 ☐ Other – *Specify*

____

A4. Prior to the week of April 15, 1999, when did you last work for pay (or profit)?

0 ☐ ←***Mark (X) this box if never worked for pay (or profit) and SKIP to Part D, page 7***

	Month	Year
LAST WORKED		19

A5. What kind of work were you doing on this last job – that is, what was your occupation? *Please be as specific as possible, including any area of specialization.*

EXAMPLE: *College professor – Electrical engineering*

____

____

____

A6. Using the JOB CODES LIST (pages 12–13), choose the code that BEST describes the work you were doing on this last job.

CODE | | | → ***SKIP to A41, page 6***

A7. *(IF WORKED DURING WEEK OF APRIL 15TH)* **Counting *all* jobs held during the week of April 15, 1999, did you USUALLY work . . .**

1 ☐ A total of 35 or more hours per week → ***SKIP to A10***
2 ☐ Fewer than 35 hours per week

A8. *(IF FEWER THAN 35 HOURS)* **During the week of April 15, did you want to work a full-time work week of 35 or more hours?**

1 ☐ Yes
2 ☐ No

A9. What were your reasons for working a part-time work week (i.e., less than 35 hours) during the week of April 15?

Mark (X) all that apply

Year Retired

1 ☐ Retired or semi-retired → 19 |
2 ☐ Student
3 ☐ Family responsibilities
4 ☐ Chronic illness or permanent disability
5 ☐ Suitable full-time work week job not available
6 ☐ Did not need or want to work full-time
7 ☐ Other – *Specify*

____

____

} ***SKIP to A11, page 2***

A10. *(IF 35 OR MORE HOURS)* **Although you were working during the week of April 15, had you previously RETIRED from any position?**

Examples of retirement include mandatory retirement, early retirement, or voluntary retirement

Year Retired

1 ☐ Yes → 19 |
2 ☐ No

The next several questions ask about your principal employer.

A11. Who was your principal employer during the week of April 15, 1999?

IF MORE THAN ONE JOB: *Record employer for whom you worked the most hours that week*

IF EMPLOYER HAD MORE THAN ONE LOCATION: *Record location where you usually worked*

Employer Name ____________________

City/Town ____________________

State/Foreign Country ____________________ ZIP Code __________

A12. Thinking about your employer's main business (i.e., what your employer makes or does), under which of these categories does your employer's *main business* BEST fit?

IF PRINCIPAL EMPLOYER HAS MORE THAN ONE TYPE OF BUSINESS: *Please answer for the type of business primarily performed at the location where you work*

Mark (X) ONLY One

1 ☐ Agriculture, forestry, or fishing
2 ☐ Biotechnology
3 ☐ Construction or mining
4 ☐ Education
5 ☐ Finance, insurance or real estate services
6 ☐ Health services
7 ☐ Information technology or computer services
8 ☐ Other services (e.g., social, legal, business)
9 ☐ Manufacturing
10 ☐ Public administration/government
11 ☐ Research – *Specify* ↴

____

12 ☐ Transportation services, utilities or communications
13 ☐ Wholesale or retail trade
14 ☐ Other

A13. Counting all locations where this employer operates, how many people work for your principal employer? Your best estimate is fine.

Mark (X) ONLY One

1 ☐ Under 10 employees
2 ☐ 10–24 employees
3 ☐ 25–99 employees
4 ☐ 100–499 employees
5 ☐ 500–999 employees
6 ☐ 1,000–4,999 employees
7 ☐ 5,000+ employees

A14. Did your principal employer come into being as a new business within the past 5 years?

1 ☐ Yes
2 ☐ No

A15. Was your principal employer during the week of April 15 . . .

IF EMPLOYER WAS A SCHOOL: *Mark (X) the type of organizational charter (e.g., mark "state government" for state schools; most private schools are "private not-for-profit")*

Mark (X) ONLY One

1 ☐ A PRIVATE FOR-PROFIT company, business or individual, working for wages, salary or commissions
2 ☐ A PRIVATE NOT-FOR-PROFIT, tax-exempt, or charitable organization
3 ☐ SELF-EMPLOYED in own NOT INCORPORATED business, professional practice, or farm
4 ☐ SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm
5 ☐ Local GOVERNMENT (e.g., city, county)
6 ☐ State GOVERNMENT
7 ☐ U.S. military service, active duty or Commissioned Corps (e.g., USPHS, NOAA)
8 ☐ U.S. GOVERNMENT (e.g., civilian employee)
9 ☐ Other – *Specify* ↴

____

A16. Was your principal employer an educational institution?

1 ☐ Yes
2 ☐ No → ***SKIP to A20, page 3***

A17. *(IF EDUCATIONAL INSTITUTION)* **Was this educational institution a . . .**

Mark (X) ONLY One

1 ☐ Preschool, elementary, or middle school or system ⎤ ***SKIP to A20, page 3***
2 ☐ Secondary school or system ⎦
3 ☐ Two-year college, community college, technical institute
4 ☐ Four-year college or university, other than a medical school
5 ☐ Medical school (including university-affiliated hospital or medical center)
6 ☐ University-affiliated research institute
7 ☐ Something else – *Specify* ↴

____

A18. What was your faculty rank?

Mark (X) ONLY One

1 ☐ Not applicable at this institution
2 ☐ Not applicable for my position
3 ☐ Professor
4 ☐ Associate Professor
5 ☐ Assistant Professor
6 ☐ Instructor
7 ☐ Lecturer
8 ☐ Adjunct Faculty
9 ☐ Other – *Specify* ↙

____

____

A19. What was your tenure status?

Mark (X) ONLY One

1 ☐ Not applicable: no tenure system at this institution
2 ☐ Not applicable: no tenure system for my position
3 ☐ Tenured
4 ☐ On tenure track but not tenured
5 ☐ Not on tenure track

The next set of questions ask about your work on your principal job during the week of April 15, 1999.

A20. What kind of work were you doing on your principal job held during the week of April 15, 1999 — that is, what was your occupation? *Please be as specific as possible, including any area of specialization.*

EXAMPLE: *College professor – Electrical engineering*

____

____

____

A21. Using the JOB CODES LIST (pages 12–13), choose the code that BEST describes the work you were doing on your principal job during the week of April 15.

CODE | |

A22. Did your duties on this job require the technical expertise of a bachelor's degree or higher in . . .

Mark (X) Yes or No for each

	YES ↓	NO ↓
1. Engineering, computer science, math, or the natural sciences	1 ☐	2 ☐
2. The social sciences	1 ☐	2 ☐
3. Some other field (e.g., health or business) – *Specify* ↙	1 ☐	2 ☐

____

A23. Was this job a "postdoc?"

A "postdoc" is a temporary position awarded in academe, industry, or government primarily for gaining additional education and training in research

1 ☐ Yes
2 ☐ No → ***SKIP to A26, page 4***

A24. *(IF YES)* **What were your reasons for taking this postdoc?**

Mark (X) Yes or No for each

	YES ↓	NO ↓
1. Additional training in PhD field . . .	1 ☐	2 ☐
2. Training in an area outside of PhD field	1 ☐	2 ☐
3. Work with a specific person or place	1 ☐	2 ☐
4. Other employment not available	1 ☐	2 ☐
5. Postdoc generally expected for career in this field	1 ☐	2 ☐
6. Some other reason – *Specify* ↙ . . .	1 ☐	2 ☐

____

A25. What were your two MOST important reasons for taking this postdoc? *Enter number of appropriate reason from A24 above.*

1. ____ MOST important reason

2. ____ SECOND MOST important reason *(Enter "0" if no second most)*

A26. During what month and year did you start this job, (that is, your principal job held during the week of April 15, 1999)?

	Month	Year
JOB STARTED		19

A27. Thinking about the relationship between your work and your education, to what extent was your work on your principal job held during the week of April 15 related to your (first U.S.) doctoral degree? Was it . . .

Mark (X) ONLY One

1 ☐ Closely related → **SKIP to A30**
2 ☐ Somewhat related → **SKIP to A30**
3 ☐ Not related

A28. *(IF NOT RELATED)* **Did these factors influence your decision to work in an area OUTSIDE THE FIELD OF YOUR (FIRST U.S.) DOCTORAL DEGREE?**

Mark (X) Yes or No for each

	YES	NO
1. Pay, promotion opportunities	1☐	2☐
2. Working conditions (e.g., hours, equipment, working environment)	1☐	2☐
3. Job location	1☐	2☐
4. Change in career or professional interests	1☐	2☐
5. Family-related reasons (e.g., children, spouse's job moved)	1☐	2☐
6. Job in highest degree field not available	1☐	2☐
7. Other reason – *Specify*	1☐	2☐

A29. Which TWO factors in A28 represent your MOST important reasons for working in an area outside the field of your (first U.S.) doctoral degree? *Enter number of appropriate reason from A28 above.*

1. ____ MOST important reason

2. ____ SECOND MOST important reason *(Enter "0" if no second most)*

A30. The next question is about your work activities on your principal job. Which of the following work activities occupied 10 percent or more of your time during a TYPICAL work week on this job?

Mark (X) Yes or No for each

	YES	NO
1. Accounting, finance, contracts	1☐	2☐
2. Applied research – study directed toward gaining scientific knowledge to meet a recognized need	1☐	2☐
3. Basic research – study directed toward gaining scientific knowledge primarily for its own sake	1☐	2☐
4. Computer applications, programming, systems development	1☐	2☐
5. Development – using knowledge gained from research for the production of materials, devices	1☐	2☐
6. Design of equipment, processes, structures, models	1☐	2☐
7. Employee relations – including recruiting, personnel development, training	1☐	2☐
8. Managing and supervising	1☐	2☐
9. Production, operations, maintenance (e.g., truck driving, machine tooling, auto/machine repairing)	1☐	2☐
10. Professional services (e.g., health care, counseling, financial services, legal services)	1☐	2☐
11. Sales, purchasing, marketing, customer service, public relations	1☐	2☐
12. Quality or productivity management	1☐	2☐
13. Teaching	1☐	2☐
14. Other – *Specify*	1☐	2☐

A31. On which TWO activities in A30 did you work the MOST hours during a typical week on this job? *Enter number of appropriate activity from A30 above.*

1. ____ Activity MOST hours

2. ____ Activity SECOND MOST hours *(Enter "0" if no second most)*

A32. Did you supervise the work of others as part of your principal job held during the week of April 15?

Mark "YES": *If you assigned duties to workers AND recommended or initiated personnel actions such as hiring, firing or promoting*

TEACHERS: *Do NOT count students*

1 ☐ Yes
2 ☐ No → ***SKIP to A34***

A33. *(IF YES)* **How many people did you typically . . .**

IF NONE: *Enter "0"*

	Number Supervised
1. Supervise DIRECTLY?	____________
2. Supervise through subordinate supervisors? . . .	____________

A34. Before deductions, what was your basic ANNUAL salary on this job as of the week of April 15, 1999? (Do NOT include bonuses, overtime, or additional compensation for summertime teaching or research)

IF NOT SALARIED: *Please estimate your earned income, excluding business expenses*

$ ____________ .00
BASIC ANNUAL SALARY/EARNED INCOME

A35. During a typical week on this job, how many hours did you usually work?

NUMBER OF HOURS PER WEEK ____________

A36. Including paid vacation and paid sick leave, upon how many weeks per year was your salary based?

NUMBER OF WEEKS PER YEAR ____________

A37. During the week of April 15, 1999, were you working for pay (or profit) at a second job (or business), including part-time, evening, or weekend work?

1 ☐ Yes
2 ☐ No → ***SKIP to A41, page 6***

A38. *(IF YES)* **What kind of work were you doing at your second job during the week of April 15 — that is, what was your occupation?** *Please be as specific as possible, including any area of specialization.*

IF YOU HAD MORE THAN TWO JOBS THAT WEEK: *Answer for the job where you worked the second most hours*

____

____

____

A39. Using the JOB CODES LIST (pages 12-13), choose the code that BEST describes the work you were doing on your second job during the week of April 15.

CODE | |

A40. To what extent was your work on this second job related to your (first U.S.) doctoral degree? Was it . . .

Mark (X) ONLY One

1 ☐ Closely related
2 ☐ Somewhat related
3 ☐ Not related

A41. **Thinking back now to 1998, was any of your work during 1998 supported by CONTRACTS OR GRANTS from the U.S. government?**

0 ☐ ← ***Mark (X) this box if you did not work in 1998 and SKIP to B1***

FEDERAL EMPLOYEES: *Please answer "No"*

Mark (X) ONLY One

1 ☐ Yes
2 ☐ No → ***SKIP to A43***
3 ☐ Don't know → ***SKIP to A43***

A42. *(IF YES)* **Which Federal agencies or departments were supporting your work?**

Mark (X) all that apply

1 ☐ Agency for International Development (AID)
2 ☐ Agriculture Department (USDA)
3 ☐ Commerce Department (DOC)
4 ☐ Defense Department (DOD)
5 ☐ Department of Education (include NCES, OERI, FIPSE, FIRST)
6 ☐ Energy Department (DOE)
7 ☐ Environmental Protection Agency (EPA)
8 ☐ Health and Human Services Department (Excluding NIH)
9 ☐ Interior Department
10 ☐ National Aeronautics and Space Administration (NASA)
11 ☐ National Institutes of Health (NIH)
12 ☐ National Science Foundation (NSF)
13 ☐ Transportation Department (DOT)
14 ☐ Other – *Specify* ↓

____

15 ☐ DON'T KNOW SOURCE AGENCY

A43. **Counting all jobs held in 1998, what was your TOTAL EARNED income for 1998, BEFORE deductions?** *Include all wages, salaries, bonuses, overtime, commissions, consulting fees, net income from businesses, summertime teaching or research, postdoctoral appointment, or other work associated with scholarships*

$ ____________ .00
TOTAL 1998 EARNED INCOME

PART B – Past Employment

The next few questions will help us better understand employment changes over time.

B1. **Were you working for pay (or profit) during BOTH of these time periods — the week of April 15, 1997 AND the week of April 15, 1999?**

IF YOU WERE A STUDENT: *Do NOT count financial aid awards with no work requirement*

1 ☐ Yes
2 ☐ No → ***SKIP to C1***

B2. *(IF YES)* **During these two time periods — the week of April 15, 1997, and the week of April 15, 1999 — were you working for . . .**

Mark (X) ONLY One

1 ☐ Same employer AND same job → ***SKIP to C1***
2 ☐ Same employer BUT different job
3 ☐ Different employer BUT same job
4 ☐ Different employer AND different job

B3. *(IF DIFFERENT)* **Why did you change your employer or your job?**

Mark (X) Yes or No for each

	YES ↓	NO ↓
1. Pay, promotion opportunities	1 ☐	2 ☐
2. Working conditions (e.g., hours, equipment, working environment)	1 ☐	2 ☐
3. Job location	1 ☐	2 ☐
4. Change in career or professional interests	1 ☐	2 ☐
5. Family-related reasons (e.g., children, spouse's job moved)	1 ☐	2 ☐
6. School-related reasons (e.g., returned to school, completed a degree)	1 ☐	2 ☐
7. Laid off or job terminated (includes company closings, mergers, buyouts, grant or contract ended)	1 ☐	2 ☐
8. Retired	1 ☐	2 ☐
9. Other – *Specify* ↓	1 ☐	2 ☐

____

PART C – Other Work and Career Related Experience

C1. **During the past year, did you attend any professional society or association meetings or professional conferences?** *Include regional, national, or international meetings*

1 ☐ Yes
2 ☐ No

C2. To how many national or international professional societies or associations do you currently belong?

Number ________ **OR** 0 ☐ NONE

C3. During the past year, did you attend any WORK-RELATED workshops, seminars, or other work-related training activities? *Do NOT include college courses – these will be discussed in PART D*

Do NOT include professional meetings unless you attended a special training session conducted at the meeting/conference

1 ☐ Yes
2 ☐ No → ***SKIP to D1***

C4. *(IF YES)* **During the past year, in which of the following areas did you attend work-related workshops, seminars, or other work-related training activities?**

Mark (X) Yes or No for each

	YES ↓	NO ↓
1. Management or supervisor training . . .	1 ☐	2 ☐
2. Training in your occupational field . . .	1 ☐	2 ☐
3. General professional training (e.g., public speaking, business writing) . . .	1 ☐	2 ☐
4. Other work-related training – *Specify* ↘	1 ☐	2 ☐

____

C5. For which of the following reasons did you attend training activities during the past year?

Mark (X) Yes or No for each

	YES ↓	NO ↓
1. To facilitate a change in your occupational field	1 ☐	2 ☐
2. To gain FURTHER skills or knowledge in your occupational field	1 ☐	2 ☐
3. For licensure/certification	1 ☐	2 ☐
4. To increase opportunities for promotion/advancement/higher salary	1 ☐	2 ☐
5. To learn skills or knowledge needed for a recently acquired position	1 ☐	2 ☐
6. Required or expected by employer . .	1 ☐	2 ☐
7. Other – *Specify* ↘	1 ☐	2 ☐

____

C6. What was your most important reason for attending training activities? *Enter number of appropriate reason from C5 above.*

MOST IMPORTANT REASON FROM C5 ____

PART D – Background Information

D1. Between April 1997 and April 1999, did you take any college or university courses or enroll in a college or university for other reasons, such as completing another Master's or doctorate?

1 ☐ Yes
2 ☐ No → ***SKIP to E1, page 8***

D2. *(IF YES)* **In which college or university department were you primarily taking classes or doing research, etc. (e.g., English, chemistry)?**

DEPARTMENT

____

D3. During that time, toward what degree or certificate, if any, were you (or are you) working?

0 ☐ ← ***Mark (X) this box if no specific degree or certificate and SKIP to D7, page 8***

IF MORE THAN ONE APPLIES: *Mark the highest level*

Mark (X) ONLY One

1 ☐ Bachelor's degree
2 ☐ Post baccalaureate certificate
3 ☐ Master's degree (including MBA)
4 ☐ Post master's certificate
5 ☐ Doctorate (e.g., Ph.D., D.S.C., D.Sc., Ed.D.)
6 ☐ Other professional degree (e.g., JD, LLB, ThD, MD, DDS) – *Specify* ↘

____

7 ☐ Other – *Specify* ↘

____

D4. Between April 1997 and April 1999, did you complete a degree or certificate?

1 ☐ Yes
2 ☐ No → ***SKIP to D7, page 8***

D4a. *(IF YES)* **What degree or certificate did you receive?** *Enter number of appropriate TYPE OF DEGREE/CERTIFICATE received from D3 above.*

TYPE OF DEGREE/CERTIFICATE FROM D3 ____

D5. **In what month and year was this degree or certificate awarded?**

IF YOU COMPLETED MORE THAN ONE: *Enter the date for the highest degree or certificate awarded*

Month | Year

19

D6. **From which academic institution did you receive this degree or certificate?**

School Name

City/Town

State/Foreign Country

D7. **What was your primary field of study during that time?**

PRIMARY FIELD OF STUDY

D8. **For which of the following reasons were you taking classes or enrolled between April 1997 and April 1999?**

Mark (X) Yes or No for each

	YES	NO
1. To gain further education before beginning a career	1☐	2☐
2. To prepare for graduate school	1☐	2☐
3. To change your academic or occupational field	1☐	2☐
4. To gain FURTHER skills or knowledge in your academic or occupational field	1☐	2☐
5. For licensure/certification	1☐	2☐
6. To increase opportunities for promotion, advancement, or higher salary	1☐	2☐
7. Required or expected by employer	1☐	2☐
8. For leisure/personal interest	1☐	2☐
9. Other – *Specify*	1☐	2☐

D9. **Were ANY of your school-related costs for taking college or university courses during this time paid for by an employer?**

1☐ Yes
2☐ No

PART E – Recent Doctorate Recipients

E1. **Did you receive your (first U.S.) doctoral degree at any time between July 1996 and June 1998?**

1☐ Yes
2☐ No → ***SKIP to F1, page 10***

E2. *(IF YES)* **Between completing your doctorate and the week of April 15, 1999 have you sought or held what you would consider a "career path" job?**

A "career path" job is a job that will help further your career plans or is a job in a field where you want to make your career

1☐ Yes, have sought or held a career path job
2☐ No, have not sought or held a career path job → ***SKIP to E7, page 9***

E3. *(IF YES)* **To what extent, if at all, was your search for a career path job limited by . . .**

Mark (X) ONLY One for each item

	A Great Deal	Some-what	Not Much/ Not At All	Not Appli-cable
1. Family responsibilities	1☐	2☐	3☐	4☐
2. Spouse's career or employment	1☐	2☐	3☐	4☐
3. Debt burden from undergraduate or graduate degrees	1☐	2☐	3☐	4☐
4. Desire to not relocate or move to place of job	1☐	2☐	3☐	4☐
5. Suitable job not available	1☐	2☐	3☐	4☐
6. Other – *Specify*	1☐	2☐	3☐	4☐

E4. Which of the following resources did you use for seeking or finding your first career path job after receiving your doctorate?

If you have not yet obtained a career path job, please indicate the sources used in your job search

Mark (X) Yes or No for each

	YES	NO
1. Faculty or advisors	1☐	2☐
2. Professional recruiters such as "head hunters"	1☐	2☐
3. College or department placement office	1☐	2☐
4. Professional meetings	1☐	2☐
5. Electronic postings	1☐	2☐
6. Newspapers	1☐	2☐
7. Professional journals	1☐	2☐
8. Informal channels through colleagues or friends	1☐	2☐
9. Direct contacts you initiated with company (e.g., sent unsolicited vita)	1☐	2☐
10. Other – *Specify*	1☐	2☐

____

E5. Which TWO resources in E4 were most responsible for finding your first career path job? *Enter number of appropriate resource from E4 above.*

0 ☐ ← ***Mark (X) this box if you have not held or accepted a career path job since receiving your doctorate and SKIP to E7***

1. _____ MOST important resource

2. _____ SECOND MOST important resource *(Enter "0" if no second resource)*

E6. How many months elapsed between the time you completed your doctorate and the time you accepted your first career path job?

If your career path job began while you were completing or within one month of receiving your doctoral degree: Enter "0"

NUMBER OF MONTHS ____________

E7. In terms of preparing you for a career, how adequate was your doctoral program or training in each of the following areas?

Mark (X) ONLY One for each item

	Very Adequate	Somewhat Adequate	Not Adequate	Not Applicable
1. General problem solving skills	1☐	2☐	3☐	4☐
2. Subject matter knowledge	1☐	2☐	3☐	4☐
3. Oral communication skills	1☐	2☐	3☐	4☐
4. Teaching skills	1☐	2☐	3☐	4☐
5. Collaboration and team work skills	1☐	2☐	3☐	4☐
6. Quantitative skills	1☐	2☐	3☐	4☐
7. Writing skills	1☐	2☐	3☐	4☐
8. Computer skills	1☐	2☐	3☐	4☐
9. Research integrity/ ethics	1☐	2☐	3☐	4☐
10. Establishing contacts with colleagues in field	1☐	2☐	3☐	4☐
11. Management or administrative skills	1☐	2☐	3☐	4☐

E8. In which TWO areas in E7 would you have liked to have had more training or emphasis in your doctoral program? *Enter number of appropriate area from E7 above.*

0 ☐ ← ***Mark (X) this box if none (no additional training or emphasis desired)***

1. _____ FIRST area

2. _____ SECOND area *(Enter "0" if no second area)*

E9. Overall, how satisfied are you with the doctoral program you completed?

Mark (X) ONLY One

1 ☐ Very satisfied
2 ☐ Somewhat satisfied
3 ☐ Somewhat dissatisfied
4 ☐ Very dissatisfied

PART F – Demographic Information

F1. As of the week of April 15, 1999 were you . . .

Mark (X) ONLY One

1 ☐ Married
2 ☐ Widowed
3 ☐ Separated
4 ☐ Divorced
5 ☐ Never Married

Widowed, Separated, Divorced, Never Married → ***SKIP to F4***

F2. *(IF MARRIED)* **During the week of April 15, was your spouse working for pay (or profit) at a full-time or part-time job?**

1 ☐ Yes, full-time
2 ☐ Yes, part-time
3 ☐ No → ***SKIP to F4***

F3. *(IF YES)* **Did your spouse's duties on this job require the technical expertise of a bachelor's degree or higher in . . .**

Mark (X) Yes or No for each

	YES ↓	NO ↓
1. Engineering, computer science, math or the natural sciences	1☐	2☐
2. The social sciences	1☐	2☐
3. Some other field (e.g., health or business) – *Specify* ⤵	1☐	2☐

____

F4. During the week of April 15, did you have any children living with you as part of your family?

Only count children who lived with you at least 50 percent of the time

1 ☐ Yes → ***GO to F5***
2 ☐ No → ***SKIP to F6***

F5. *(IF YES)* **How many of these children living with you as part of your family were . . .**

IF NO CHILDREN IN A CATEGORY: *Enter "0"*

	Number of Children
1. Under age 2	______
2. Aged 2 – 5	______
3. Aged 6 – 11	______
4. Aged 12 – 17	______
5. Aged 18 or older	______

F6. During the week of April 15, 1999, were you living in the United States or one of its territories, or were you living in another country?

1 ☐ United States or one of its territories
2 ☐ Another country

F7. As of the week of April 15, 1999, were you a . . .

Mark (X) ONLY One

U.S. Citizen

1 ☐ Native born
2 ☐ Naturalized

→ ***SKIP to F9***

Non-U.S. Citizen

3 ☐ With a Permanent U.S. Resident Visa
4 ☐ With a Temporary U.S. Resident Visa
5 ☐ Living outside the United States

F8. *(IF NON-U.S. CITIZEN)* **Of which country are you a citizen?**

COUNTRY

____

F9. What is your birthdate?

Month	Day	Year
		19

The next question is designed to help us better understand the career paths of individuals with different physical abilities.

F10. What is the USUAL degree of difficulty you have with . . .

MARK (X) ONE FOR EACH

	None	Slight	Moderate	Severe	Unable to Do
1. SEEING words or letters in ordinary newsprint (with glasses/contact lenses if you usually wear them)	1☐	2☐	3☐	4☐	5☐
2. HEARING what is normally said in conversation with another person (with hearing aid, if you usually wear one)	1☐	2☐	3☐	4☐	5☐
3. WALKING without human or mechanical assistance or using stairs	1☐	2☐	3☐	4☐	5☐
4. LIFTING or carrying something as heavy as 10 pounds, such as a bag of groceries	1☐	2☐	3☐	4☐	5☐

F11. 0☐ ← ***Mark (X) this box if you answered "None" TO ALL ACTIVITIES in F10 and SKIP to F13***

F12. What is the earliest age at which you FIRST began experiencing ANY difficulties in ANY of these areas?

AGE ____ **OR** 0☐ SINCE BIRTH

F13. In case we need to clarify some of the information you have provided, please list a phone number (and an e-mail address if applicable) where you can be reached.

DAYTIME Area Code ___ – Number ___ – ____ **EVENING** Area Code ___ – Number ___ – ____

E-MAIL ADDRESS ______________________

F14. Since we are interested in how education and employment change over time, we may be recontacting you in 2001. To help us contact you, please provide the name, address, and telephone number of two people who are likely to know where you can be reached. DO NOT INCLUDE SOMEONE WHO LIVES IN YOUR HOUSEHOLD.

As with all the information provided in this questionnaire, complete confidentiality will be provided. These people will only be contacted if we have trouble contacting you in 2001.

First Name MI Last Name	First Name MI Last Name
Number and Street	Number and Street
City/Town State ZIP Code	City/Town State ZIP Code
Country (If outside U.S.)	Country (If outside U.S.)
Area Code ___ – Number ___ – ____	Area Code ___ – Number ___ – ____

F15. PLEASE TURN TO THE BACK COVER FOR THE LAST QUESTION (F16).

JOB CODES LIST

This list is ordered alphabetically. The titles in bold type are broad job categories. To make sure you have found the BEST code, please review ALL broad categories before making your choice. If you cannot find the code that BEST describes your job, use the "OTHER" code under the most appropriate broad category in bold print. If none of the codes fit your job, use code 500.

010 **Artists, Broadcasters, Editors, Entertainers, Public Relations Specialists, Writers**

Biological/Life Scientists
021 Agricultural and food scientists
022 Biochemists and biophysicists
023 Biological scientists (e.g., botanists, ecologists, zoologists)
024 Forestry and conservation scientists
025 Medical scientists (excluding practitioners)
026 Technologists and technicians in the biological/life sciences
027 OTHER biological/life scientists

Clerical/Administrative Support
031 Accounting clerks, bookkeepers
032 Secretaries, receptionists, typists
033 OTHER administrative (e.g., record clerks, telephone operators)

040 **Clergy and Other Religious Workers**

Computer Occupations *(Also see 173)*
*** Computer engineers *(See 087, 088 under Engineering)*
051 Computer programmers (business, scientific, process control)
052 Computer system analysts
053 Computer scientists, except system analysts
054 Information systems scientists or analysts
055 OTHER computer, information science occupations

*** **Consultants** *(Select the code that comes closest to your usual area of consulting)*

070 **Counselors, Educational and Vocational** *(Also see 236)*

Engineers, Architects, Surveyors
081 Architects
*** Engineers *(Also see 100–103)*
  082 Aeronautical, aerospace, astronautical engineer
  083 Agricultural engineer
  084 Bioengineering and biomedical engineer
  085 Chemical engineer
  086 Civil, including architectural and sanitary engineer

*** Engineers *(Continued)*
  087 Computer engineer – hardware
  088 Computer engineer – software
  089 Electrical, electronic engineer
  090 Environmental engineer
  091 Industrial engineer
  092 Marine engineer or naval architect engineer
  093 Materials or metallurgical engineer
  094 Mechanical engineer
  095 Mining or geological engineer
  096 Nuclear engineer
  097 Petroleum engineer
  098 Sales engineer
  099 Other engineer
*** Engineering Technologists and Technicians
  100 Electrical, electronic, industrial, mechanical
  101 Drafting occupations, including computer drafting
  102 Surveying and mapping
  103 OTHER engineering technologists and technicians
104 Surveyors

110 **Farmers, Foresters and Fishermen**

Health Occupations
111 Diagnosing/Treating Practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)
112 Registered nurses, pharmacists, dieticians, therapists, physician assistants
236 Psychologists, including clinical
113 Health Technologists and Technicians (e.g., dental hygienists, health record technologist/technicians, licensed practical nurses, medical or laboratory technicians, radiologic technologists/technicians)
114 OTHER health occupations

120 **Lawyers, Judges**

130 **Librarians, Archivists, Curators**

Managers, Executives, Administrators *(Also see 151–153)*
141 Top and mid-level managers, executives, administrators (people who manage other managers)
*** All other managers, including the self-employed *(Select the code that comes closest to the field you manage)*

JOB CODES LIST – Continued

Management-Related Occupations
(Also see 141)
151 Accountants, auditors, and other financial specialists
152 Personnel, training, and labor relations specialists
153 OTHER management related occupations

Mathematical Scientists
171 Actuaries
172 Mathematicians
173 Operations research analysts, modeling
174 Statisticians
175 Technologists and technicians in the mathematical sciences
176 OTHER mathematical scientists

Physical Scientists
191 Astronomers
192 Atmospheric and space scientists
193 Chemists, except biochemists
194 Geologists, including earth scientists
195 Oceanographers
196 Physicists
197 Technologists and technicians in the physical sciences
198 OTHER physical scientists

*** **Research Associates/Assistants** *(Select the code that comes closest to your field)*

Sales and Marketing
200 Insurance, securities, real estate, and business services
201 Sales Occupations – Commodities Except Retail (e.g., industrial machinery/equipment/supplies, medical and dental equipment/supplies)
202 Sales Occupations – Retail (e.g., furnishings, clothing, motor vehicles, cosmetics)
203 OTHER marketing and sales occupations

Service Occupations, Except Health
(Also see 111–114)
221 Food Preparation and Service (e.g., cooks, waitresses, bartenders)
222 Protective services (e.g., fire fighters, police, guards)
223 OTHER service occupations, except health

Social Scientists
231 Anthropologists
232 Economists
233 Historians, science and technology
234 Historians, except science and technology
235 Political scientists
236 Psychologists, including clinical *(Also see 070)*
237 Sociologists
238 OTHER social scientist

240 **Social Workers**

Teachers/Professors
251 Pre-Kindergarten and kindergarten
252 Elementary
253 Secondary – computer, math or sciences
254 Secondary – social sciences
255 Secondary – other subjects
256 Special education – primary and secondary
257 OTHER precollegiate area
*** Postsecondary
- 271 Agriculture
- 272 Art, Drama, and Music
- 273 Biological Sciences
- 274 Business Commerce and Marketing
- 275 Chemistry
- 276 Computer Science
- 277 Earth, Environmental, and Marine Science
- 278 Economics
- 279 Education
- 280 Engineering
- 281 English
- 282 Foreign Language
- 283 History
- 284 Home Economics
- 285 Law
- 286 Mathematical Sciences
- 287 Medical Science
- 288 Physical Education
- 289 Physics
- 290 Political Science
- 291 Psychology
- 292 Social Work
- 293 Sociology
- 294 Theology
- 295 Trade and Industrial
- 296 OTHER health specialties
- 297 OTHER natural sciences
- 298 OTHER social sciences
- 299 OTHER postsecondary

Other Professions
401 Construction trades, miners and well drillers
402 Mechanics and repairers
403 Precision/production occupations (e.g., metal workers, woodworkers, butchers, bakers, printing occupations, tailors, shoemakers, photographic process)
404 Operators and related occupations (e.g., machine set-up, machine operators and tenders, fabricators, assemblers)
405 Transportation/material moving occupations

500 OTHER OCCUPATIONS (Not Listed)

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